THE ARCHITECT & BUILDING NEWS

IN THIS ISSUE

- CARDINAL RESTAURANT, BIRMINGHAM
- PANOPTICON OFFICE BUILDING, COPENHAGEN

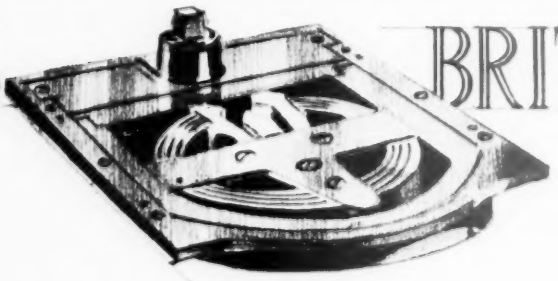
JANUARY 8, 1953 · VOL. 203 · NO. 2 · ONE SHILLING WEEKLY

Greatways to Progress

Australia House—

Foundation Stone laid by H.M. King George V, 24th July, 1913.
Officially opened by H.M. King George V, 3rd August, 1918.

Architects:—A. Marshall MacKenzie, & Son, FF.R.I.B.A.

The  BRITANNIC

Floor Spring

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WILLIAM NEWMAN & SONS Ltd

HOSPITAL STREET, BIRMINGHAM 19. Established over 200 years.

FOR THE MOST MODERN INTERPRETATION OF VERTICAL TRANSPORT

This apparatus is a project for raising stones and other materials for building construction. The prime mover appears to develop one horse power. From "Nuovo Teatro de Machine et Edifici," Vittorio Zonca, 1656.

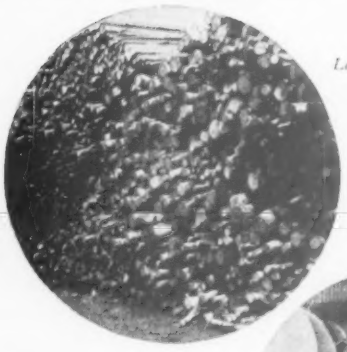
Lifts & Escalators by J. & E. HALL LIMITED

LIFT & REFRIGERATING ENGINEERS, DARTFORD, KENT

14.1337

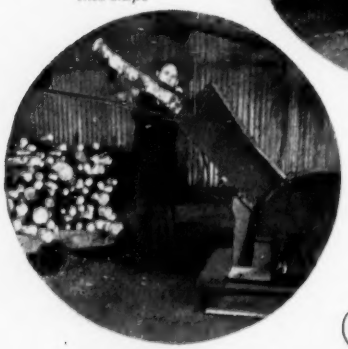
SUNDEALA Still Make Best Boards In 1953

Logs arrive at the Sundeala Factory

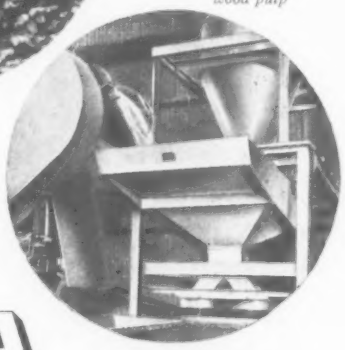


Log pile

Converting logs into chips



Grading chips prior to conversion into wood pulp



Estab. *1898.*

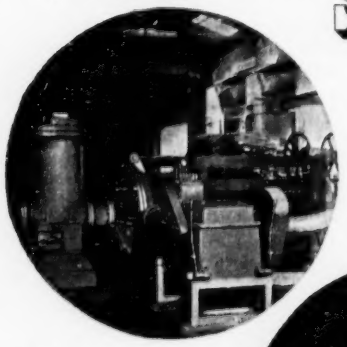
BE BRITISH
BUY BRITISH

SUNDEALA

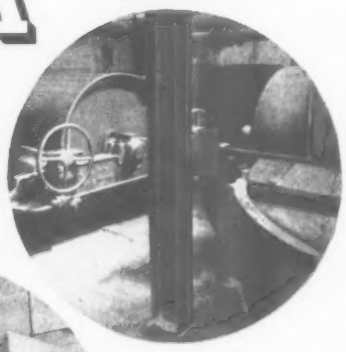
HARDBOARD

MEDIUM HARDBOARD

INSULATION BOARD

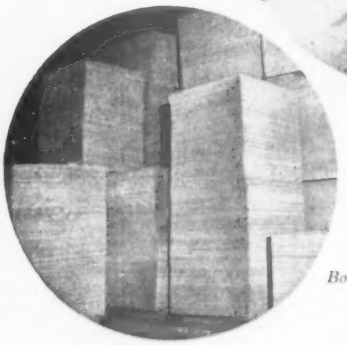


Converting wood chips to wood pulp



Beating the wood pulp

Sundeala boards can be bent to shape



Boards ready for despatch

FROM a British factory and made entirely by British labour comes **SUNDEALA,** still today, and for over 50 years, the WORLD'S BEST BUILDING BOARDS. Made in various substances, thicknesses and finishes for EXTERIOR and INTERIOR purposes, these tough, easy-to-work boards are specified by countless architects and used by good builders throughout the country. The **SUNDEALA** range covers every possible specification.

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GLASGOW: BALTIC CHAMBERS, 50 WELLINGTON STREET, C.2 NEWCASTLE: NORTHUMBRIA HOUSE, PORTLAND TERRACE, 2

An Interesting Trio

It is important that basic lighting accessories should give long and trouble-free service; it is equally important that their price should be competitive.

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Perfectly matched in appearance, and made with exacting care to the highest standards of electrical and mechanical efficiency, they bring lasting quality to millions of small installations. They are, indeed, an investment, for their employment is an insurance against costly replacements.

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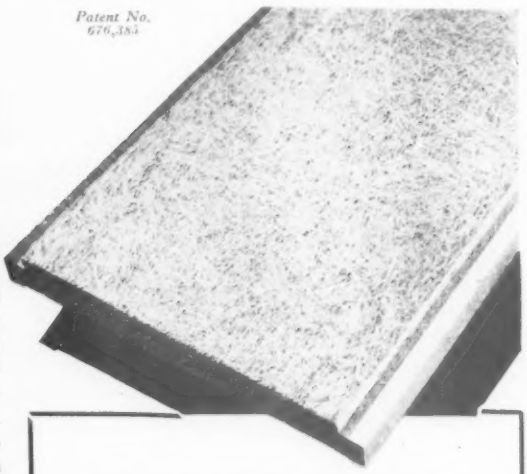
★ *Recommending*

Thermacoust

REBATED *Channel Reinforced*

WOOD WOOL ROOFING SLABS

Patent No. 676,384



THERMACOUST 3″ Rebated Roofing Slabs provide higher overall insulation. They are particularly valuable in buildings where the atmosphere may be exceptionally warm or humid. They are rebated to take 1″ insulating cork strips; in severe weather these prevent condensation on the lower flanges of the steel reinforcing channels.

THERMACOUST 3″ Rebated Roofing Slabs have the same advantages for rapid labour-saving construction as the well-known Thermacoust 2″ Roofing Slabs. They are large in unit size, easily handled, can be worked with ordinary wood-working tools. For the majority of applications, we recommend Thermacoust 2″ Roofing Slabs; for the more complicated insulation scheme, architects are now using the 3″ Rebated Slabs for Schools, Factories and Municipal buildings. Standard slabs, *both types* 6′ long; 6′ 8″ and 7′ slabs made to order.

★ **For PITCHED or FLAT Roofs**

★ **NO purlins needed at less than 7 ft. centres**

★ **NO other insulating material has greater structural strength**

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We maintain a highly-qualified technical staff to advise on the use of "Thermacoust" to the best advantage. It must be emphasised that it is NOT a matter of merely ordering an available building material. There are considerations of thermal insulation, acoustic properties, etc., and, more important, the constructional methods to ensure that the considerable savings on building costs that "Thermacoust" makes possible are in fact made. All this is best settled at the design stage. It is then that the help of our technical department and drawing office, freely available, can be most wisely employed. Enquiries are invited and will incur no obligation.

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Industrial and other organisations are becoming increasingly alive to the value of display and exhibition techniques when planning interior decoration. Heal's have many years' experience of working in this field as well as in carrying out schemes for offices, boardrooms, restaurants and hotels, and offer their services to architects. They are always ready to provide original designs of their own or work to your plans.

The Exhibition Room, the International Wood Secretariat, Dorland House, London, S.W.1. Architects: Halfhide and Partners. The furniture and fitments of Australian walnut were made by Heal's Contracts Ltd. in collaboration with the architects.

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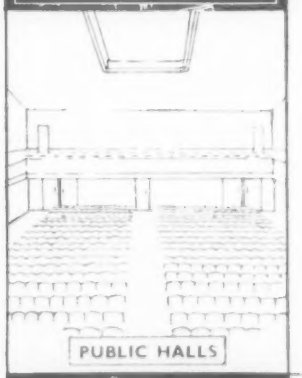
Insulation Plus!

CELOTEX HIGHLIGHT FINISH

will cut your decorating costs



Savings of between 1s. 0d. and 1s. 6d. per square yard can be made on decorating costs by using Celotex cane fibre insulating boards with the factory-applied HIGHLIGHT finish. This smooth, white finish is attractive in itself and is used extensively for linings and partitions in factories and similar industrial buildings. Where further decoration is desired (in homes, schools, offices, hospitals, churches, hotels and restaurants), the HIGHLIGHT finish provides an ideal base for the direct application of paint or distemper.

Start saving now by using Celotex Insulating Boards with the HIGHLIGHT finish—all the outstanding advantages of Celotex cane fibre insulation *plus* this attractive, money-saving finish.

Write today for samples and the names of your nearest distributors.

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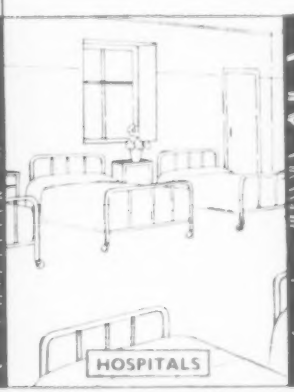

DH2

SUGG WESTMINSTER

Domestic heater fitted in L.C.C. new hutted classroom

Photograph by courtesy of the L.C.C. Education Authority.

Literature upon request from

—one of the many situations for which the Sugg *Assisted-convection gas-fired space heater* is particularly suited.

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This new development in space-heating gives remarkably even temperature from floor to ceiling.

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Various types for gas-filled, projector, tubular line-filament, mercury and sodium vapour lamps. Suitable for all kinds of decorative and useful indoor and outdoor illuminations in factories, rail yards, parking grounds, sports arenas, etc. Made in the same factory as Prismlux bulkhead fittings, Workslite industrial lighting reflectors and Maxheat Oval tubular electric heaters.

Rectangular types for mercury discharge, sodium discharge, and tubular line-filament lamps.

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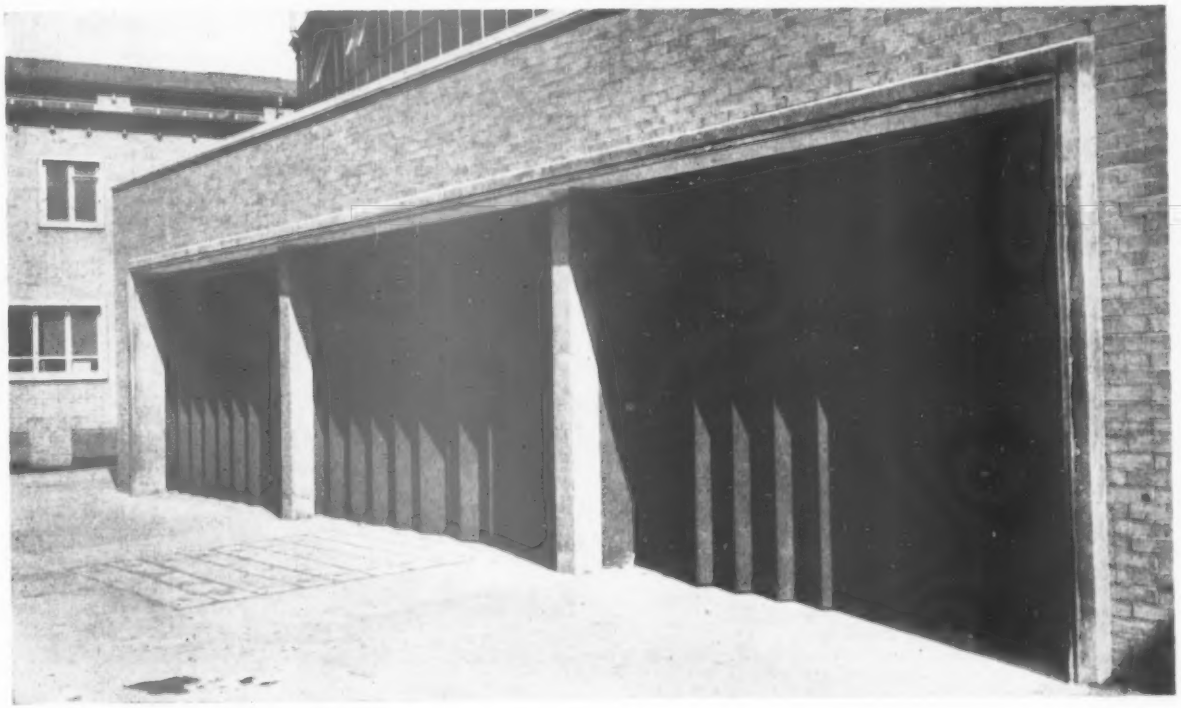

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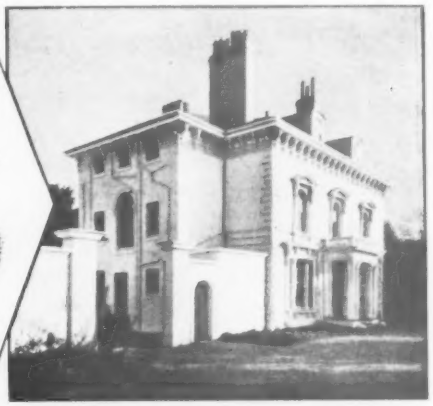

Converted Flats, Church Road, Edgbaston, Birmingham
Before and after decoration with 'FABRIGUARD'

Architect: Major Lindsay Bullivant, F.R.I.B.A.
Contractors: A. Harris & Sons Ltd., 152 Bristol Street, Birmingham.

This old building revealed a delapidated appearance with extensive flaking of accumulated coatings of distemper, linie-wash, etc. Cleaning back to original facings as much as possible left a highly alkaline and porous surface. This was coated with the **FABRIGUARD** process in an attractive shade of Ivory, emphasising the fine proportions of the building and providing sound protection of the fabric.

Emulsion Paints need much technical knowledge and experience to ensure a satisfactory product. British and Continental research and long-term tests establish **'FABRIGUARD'** in the forefront. The availability of PORCELAIN GLOSS and EXTERIOR quality in **'FABRIGUARD'** mark a distinctive advance in the field of Emulsion Paints.

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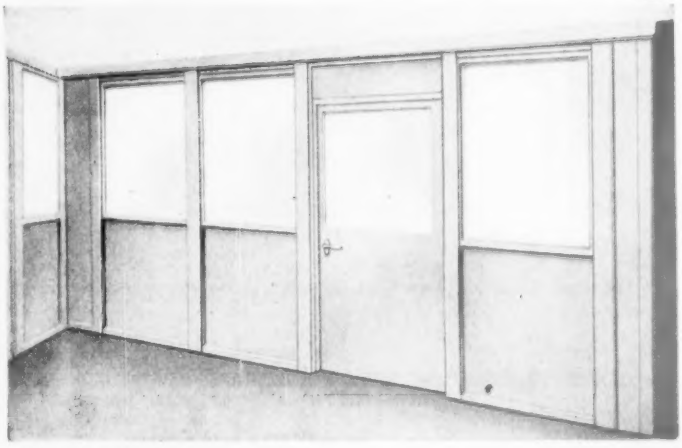

NORWOOD STEEL EQUIPMENT (LONDON) LTD.
44 NORWOOD HIGH STREET, LONDON, S.E.27 *Telephone: GIPsy Hill 1104/5*

109 lbs. F.B.
rails are used throughout this siding. Fastenings for this type of rail can be seen clearly.

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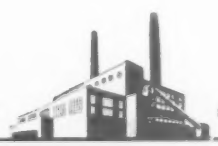
FOR MORE PRODUCTION,

USE MORE POWER,

MORE EFFICIENTLY



Troughton & Young lighting fittings have been specially designed for the School Hall at Simon Langton Girls' School at Canterbury. (Architect, L. Hugh Wilson, A.R.I.B.A., A.M.T.P.I.) We are always ready to work to architects' designs, to create new fittings for special needs, or to supply from our standard Ultralux, Tubalux, Versalite, and Mondolite ranges. Below are four examples from our Mondolite range. We invite architects to see the complete ranges at the Lighting Centre, Knightsbridge.

F.808. Finishes: pierced bowl and lamp housing, gilt anodised aluminium; suspension, satin brass; remainder, off-white. Lamp: 300 500 watts.

F.625. Finish: off-white. Lamp: 100 watts.

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F.817. Finishes: lamp housing and bowl, gilt anodised aluminium; suspension, satin brass; remainder, off-white with top diffusing glass. Lamp: 300 500 watts.

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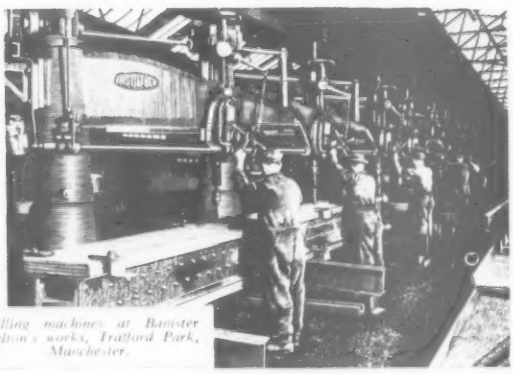
Simplicity can demolish



Drilling machines at Banister Walton's works, Trafford Park, Manchester.

In the course of a minute, simplicity can demolish the achievement of years. It is not enough to be able to construct, we must safeguard our work against the zeal of simple-minded unpickers of industry, no matter how well-intentioned they are.

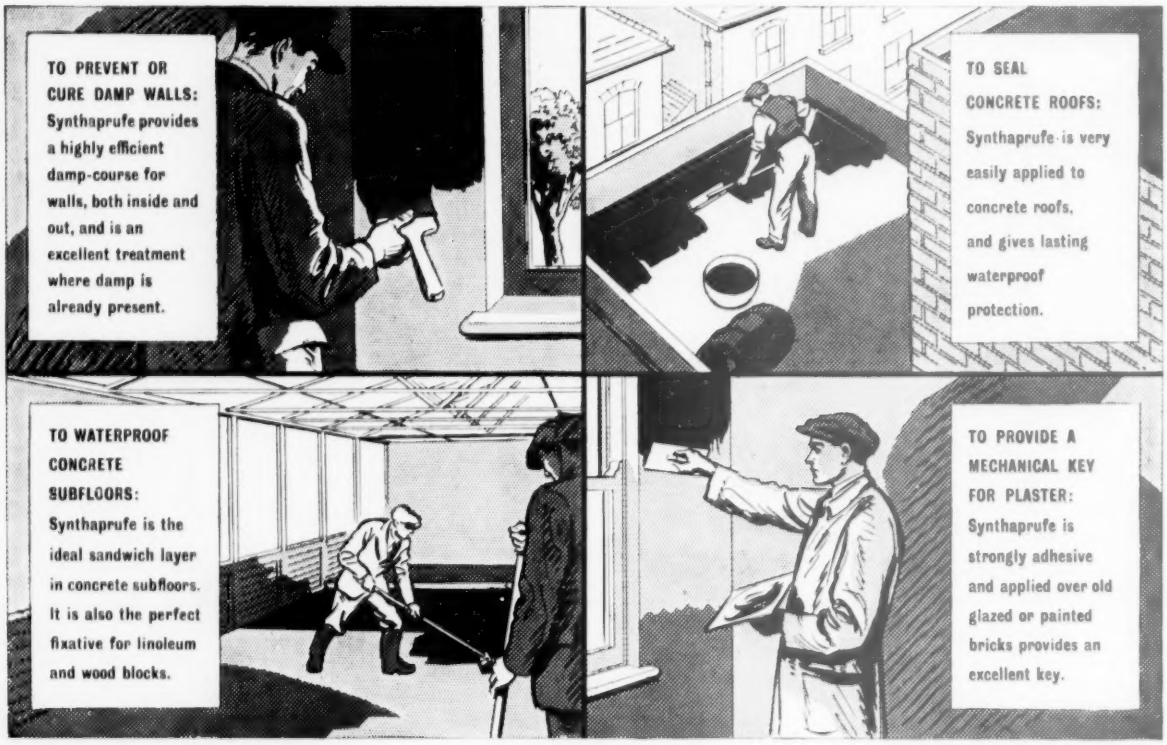
★

Banister, Walton build in steel

LONDON, S.W.1.—82 Victoria Street. MANCHESTER 17.—Trafford Park. BIRMINGHAM 18.—61-63 Western Road.

A brush-on waterproofing that contains **rubber**...

ELASTIC, ADHESIVE, IT MAKES AN IDEAL JOINTING



SYNTHAPRUFE is a waterproofing compound which can be applied cold by brush; its rubber content makes it strongly adhesive, and it sets quickly and forms a strong, elastic, moisture-proof film.

Most surfaces will take Synthaprufe—concrete, plaster, brick, metal or timber—and it is equally effective on old or new buildings.

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When applied over old and shabby glazed brick or painted brick wall surfaces (e.g. in hospitals, institutions and factories) Synthaprufe provides an excellent mechanical key for plaster finishes. This process obviates the noise, discomfort and expense of hacking.

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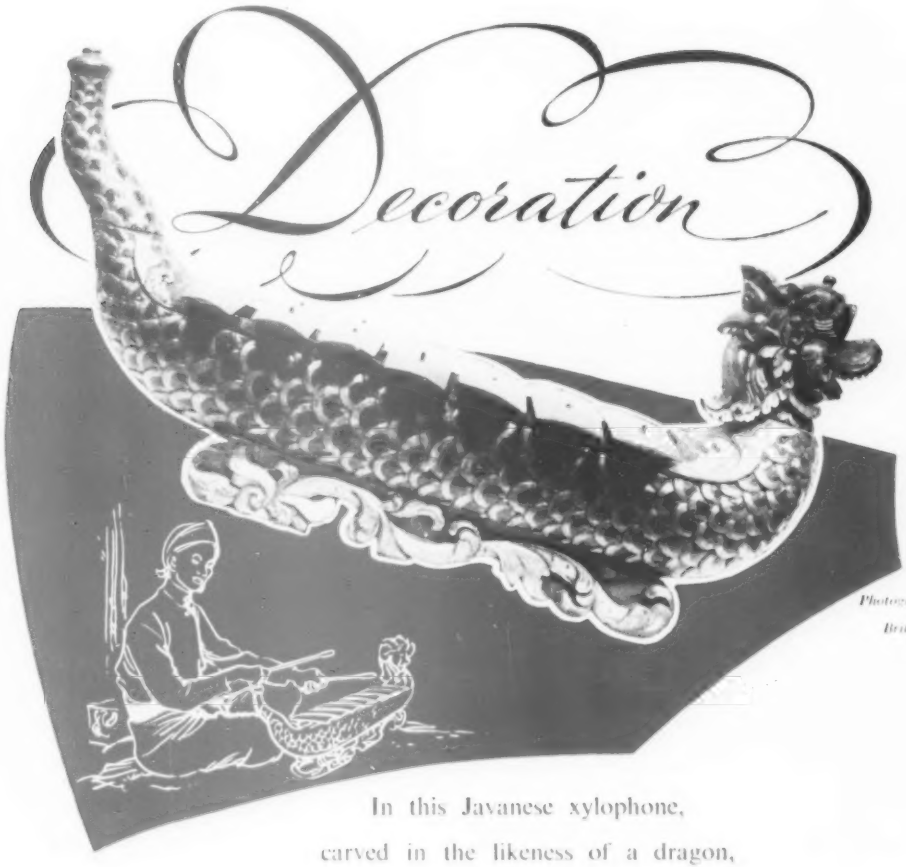
- Waterproofing old asphalt, lead, zinc, corrugated iron, or felted roofs.

SYNTHAPRUFE

Manufactured by the NCB *National Coal Board*

Synthaprufe is a product of British Coal. Further details, and advice on any technical problem, will gladly be given on application to the National Coal Board, By Products, National Provincial Bank Buildings, Docks, Cardiff.

Decoration



Photograph by courtesy of the British Museum

In this Javanese xylophone,
carved in the likeness of a dragon,
music hath charms for both eye and ear.
Though first collected early in the 19th century by
Sir Stamford Raffles, the lacquer and gilt
still glisten on every wooden scale.

SYNTHOLUX Synthetic Enamels have enduring brilliance and elasticity under all climatic conditions, however extreme.

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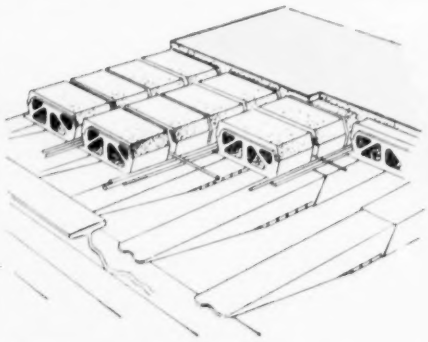
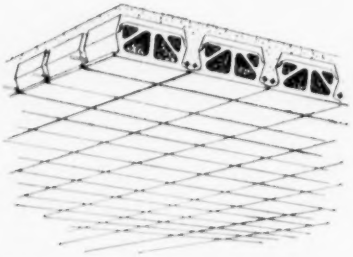
Makers of Paints, Lacquers and Varnishes for every purpose

LADYWOOD · BIRMINGHAM 16



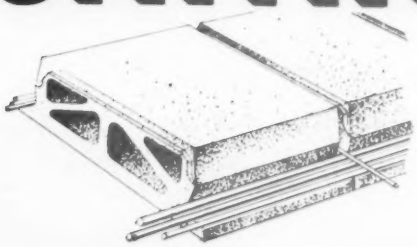
Showing Two-way Reinforcement and Hollow Concrete Blocks laid on Trianco Telescopic Centers.



Showing uniform concrete soffit. Obtained without use of slip tiles.

SEE

SMITH'S



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Thames House, Westminster

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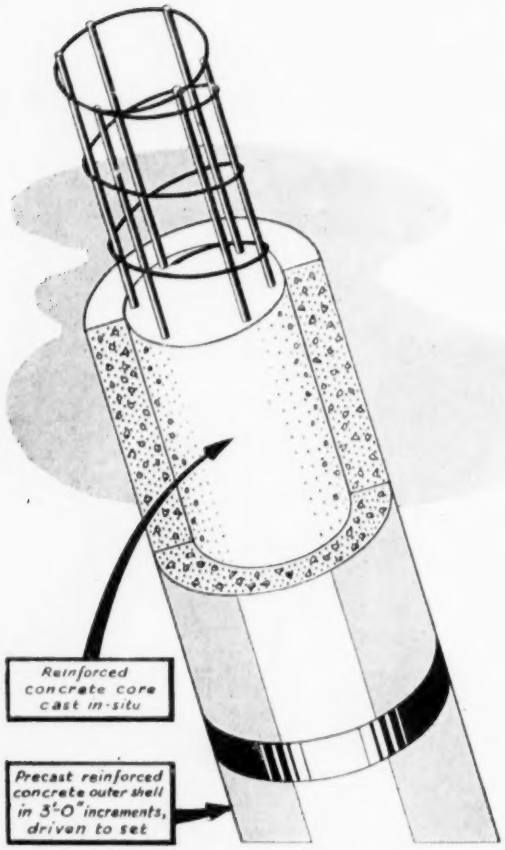

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Vol. 203 No. 2

THE ARCHITECT & BUILDING NEWS

January 8, 1953

The "Architect and Building News" incorporates the "Architect," founded in 1869, and the "Building News," founded in 1854. The annual subscription, inland and overseas, is £2 15s. 0d. post paid: U.S.A. and Canada $9.00

Published by ILIFFE & SONS LTD., DORSET HOUSE, STAMFORD STREET, LONDON, S.E.1
Telephone: WATERLOO 3333 (60 lines). *Telegrams*: "ARCHITONIA, SEDIST, LONDON."

Branch Offices: *Coventry*: 8-10 Corporation Street; *Birmingham*: King Edward House, New Street; *Manchester*: 260 Deansgate. *Tel.* Blackfriars 4412 (3 lines), Deansgate 3595 (2 lines); *Glasgow*: 268 Renfield Street.

LOOKING FORWARD

1953: the century is now well launched into its second half; Coronation year for Great Britain, a year of historic symbolism and faith for this country and a spectacle for the rest of the world; a year as hopeless for some as last year and as bright in anticipation for others; is it possible to look ahead? Not being mantled as prophets we can only build on indications from the past, on promises or on intelligent conjecture.

What is there for architecture and building at the opening of this new year? In the housing field the Government has increased the numbers of new houses being built within what are, presumably, the limits of materials and labour left over from other priorities. It now seems to be committed to make up the balance by allowing private enterprise to build, up to certain monetary limits, freely again. If there are more materials and labour available for this extra effort, it can only mean that they were unused or inefficiently used before the lifting of the ban on private house-building. Whether the numbers of houses built in the coming year will materially increase by the addition of private-enterprise houses and housing remains to be seen; the unseen controls are really the availability of capital on the one hand and, on the other, the prospects of reasonable returns for outlay in the face of continuing official controls of rents and the selling prices of houses.

The new towns are, by their reports, facing a partial crisis or even a partial failure by reason of the unequal impact of both rent controls and housing subsidies; they will be worse off if there is anything like a substantial expansion of private-enterprise house-building. For the latter will not occur much in the new towns but in and about existing towns on "land ripe for development" (in the words of the now suspended clauses of the Act), or where existing roads and services enable reduced costs and higher returns.

There is no doubt whatever that the housing situation is still a problem to be looked at fairly and squarely and for which a solution has still to be found. So far it has been too isolated from overall national planning and policy, from the parallel problems of land shortage and a relationship to industrial expansion and factory building, and from the problem of the re-development of central and suburban areas of our towns and cities.

The building of factories, and even to some extent the rebuilding of the centres of the blitzed towns and cities, may be accelerated by the prospective improvement of steel supplies. Always provided, of course, that any extra steel is not entirely absorbed into rearmament will-nilly, without, again, a fairly adjusted and related planned policy of allocation. Which causes us to reflect on the question as to what the new industrial buildings will be used for; can the country, for example, expect to remain efficient without adequate resources? The latter can only come from the increase of exports and the reduction of imports. To increase imports a new policy of industrial development for this country may be absolutely necessary for survival; if vision and imagination prevail, 1953 may well herald a new industrial revolution in Great Britain, with our exports gradually switching to those things which are not yet being made or imported by the rest of the world and our land being used for absolute production capacity instead of half-wasted, as some allege it is now. The new products that the world wants include industrial atomic power, which can be exported and also used here to save coal and oil, which in turn could be used for their right functions, their by-products, and which can even be exported; the products of jet-propulsion and the resultant aircraft and ships; the expansion of electronic equipment of all kinds, a field in which this country still leads and, lastly, the continued expansion of the ship-building industry.

This possible industrial change-over doubtless

will be made sometime, but only in proportion as its progress is not shared with rearmament expansion will it be effective. This country can scarcely be regarded at the present time as having the materials, money or men to carry out both at once efficiently; it is, we suggest, better to concentrate on certain industrial developments rather than to fight other producers for world markets in which they are already well established. If this new industrial revolution is on the threshold of history, architecture and building are faced with many new problems of design and supply and would be well advised to start to consider them.

The school programme will, presumably, continue; but less land must be devoted to it; schools must be cheaper, but not at the cost of maintenance. Other welfare buildings, hospitals, community centres, theatres, prisons and administrative buildings such as police and fire stations, municipal offices and the like, will, in the list of priorities at present known or visualized, be conspicuous by their rarity and the finer side of architectural design and the crafts of building will continue to suffer consequential stagnation.

On the side of civil engineering the crying need is for fuller effective co-ordination of the transport facilities of the country, the welding together of all kinds of movement of goods and people, by means of railways, roads, canals and aerial and coastal traffic. If ever a national plan was required it is in this field, but there are little signs of it materializing in 1953. The cost to the nation of a bad road-system, of railway redundances, the non-use of canals and of out-of-date port facilities is immense; at least let us hope that some part of the tangle may be sorted out, if only in prospect.

Finally, from the general to the particular, we consider the architectural profession and the building industry can take a greater part in the national economy; costs must be reduced by exercise of greater administrative and site efficiency and through the easier distribution of materials and by the exclusion of any restrictive practices, by whomsoever operated.

If some of the things we have outlined can be kept to the forefront of policy in this Coronation Year of 1953, it may indeed be recorded by the Muse of History as a memorable one.

EVENTS AND COMMENTS

NEW YEAR GREETINGS

To all readers of the *A. & B.N.*, a happy and prosperous New Year. It would be impossible to prepare a list of special greetings without leaving out as many worthies as were included in it. Nevertheless, I must mention our latest architectural knight, Professor William Holford, who is surely one of the most modest of men and richly deserves his honour. Ove Arup, the distinguished engineer who was made a C.B.E. in the New Year's Honours, must be the most Danish of Britons and is an expert with the squeeze-box, too. I can strongly recommend his parties if you ever have a chance to attend one. I have only one other New Year message and that is to the person, presumably male or female, who sent me an anonymous letter just before Christmas from Aberdeen. My wish is that the laundry shall lose his or her sporran. I think one wish for the New Year will be common to all of us, and that is that the summer will be a good one, and that in particular the weather at the time of the Coronation will be exactly as early June in this country should be, brilliant and not too hot. Readers living outside London may not realize how much of the constructional programme is already under way or nearing completion. Guard rails line the edge of the pavements along parts of the route already. The Mall is flanked by steel and timber stands complete except for decoration. Westminster Abbey is closed and work has begun on the Special extension, the design for which produced an angry letter to *The Times* from some distinguished academical gentlemen. The V. and A. is running a series of public lectures on subjects connected with the Coronation, and scores of firms have entered the Coronation decoration business, as it were, overnight. The rich have presumably already booked their seats at windows on the route; the distinguished and privileged are still hoping that, failing a Royal Summons to the Abbey, something will turn up in the shape of a seat in a stand. Many thousands, doubtless, have planned to come to London and to hope for the best. The majority of us, however, have done very little about the Coronation, and the decision as to whether we try to see the procession or secure a distant view of someone's hitherto derided television set will not be made until the first of June. No doubt we shall all parade the streets singing inappropriate songs and turning taxi-cabs over, but otherwise behaving much too well. On New Year's Eve, without any great enthusiasm, I wandered about the West End to see what was going on. Fairly large numbers of young people wearing paper hats bearing highly traditional slogans such as "Kiss me, baby," and "Hi-yah," were to be seen cheerfully promenading. Here and there a little raucous British singing was to be heard interspersed with the letting off of squibs under the very noses of the Metropolitan Police, who were also present in large numbers. In Piccadilly Circus, in spite of the absence of Eros, who is down below having a wash and brush up, the crowd was thickest; and although there were no illuminated fountains or Christmas trees, as in Trafalgar Square, the scene was made gay by the neon signs which some people seem to dislike so much. Cockney salesmen, never at a loss for an idea, had provided gas balloons and did a very good trade. Some of these were attached to lamp-posts and traffic lights, some escaped, but the majority

were released when the modern edition of a clock said 1200. I was filled with admiration for the law breaker who sent up a rocket from the middle of the crowd at that precise moment. How pleasant London is at night when the traffic is stopped, and what a pity it is that the idea of the Westminster precinct came to nothing.

ROBERT ATKINSON

The death of Robert Atkinson has removed another of the all too few great architectural characters of our time. I only met him half a dozen times, and was always somewhat frightened of his fierce appearance, although on one of the occasions when I was being interviewed for a job I found him very kind. Two architectural institutions owe a great deal to Mr. Atkinson, the A.A., where he revolutionized education, and the Building Centre, of which he was one of the founders. R. A.'s memory will be kept green, not only by his buildings but by the many stories of his wit and wisdom.

LONDON STARLINGS

In spite of the numbers of people in Trafalgar Square on New Year's Eve they were heavily outnumbered by the host of starlings perched on the ridges and cornices of surrounding classical buildings. Someone asked me why they sing the whole time when they ought to be asleep. I can only imagine that they do so to prevent themselves dropping off in more senses than one. The numbers of starlings which roost in central London are said to have increased enormously in recent years. All sorts of methods of discouraging them have been tried, for they not only make a noise but a considerable mess as well. No doubt someone could calculate the weight of droppings dropped on London in a year. The precise figure does not matter. The fact remains that we would sooner be without the mess. Traps are now being used. If these do not work it may be found necessary to pull down all the classical buildings round the square and build smooth modern ones. Some people would think that that was going too far. One architect would certainly do so. I refer to Gumbril senior in *Antic Hay*, who was almost the last survivor of the old inhabitants. "He liked his house, and he liked his square. Social decadence had not affected the 14 plane trees which adorned its little garden, and the gambols of the dirty children did not disturb the starlings who came, evening by evening in summer-time, to roost in their branches.

"On fine evenings he used to sit out on his balcony waiting for the coming of the birds. And just at sunset, when the sky was most golden, there would be a twittering overhead, and the black, innumerable flocks of starlings would come sweeping across on the way from their daily haunts to their roosting-places, chosen so capriciously among the tree-planted squares and gardens of the city and so tenaciously retained, year after year, to the exclusion of every other place. Why his 14 plane trees should have been chosen, Mr. Gumbril could never imagine.

"The starlings were Mr. Gumbril's most affectionately cherished friends; sitting out on his balcony to watch and listen to them, he had caught at the shut of treacherous evenings many colds and chills on the liver, he had laid up for himself many painful hours of rheumatism. These little accidents did nothing, however, to damp his affection for the birds; and still on every evening that could possibly be called fine, he was always to be seen in the twilight, sitting on the balcony, gazing up, round-spectacled and rapt, at the 14 plane trees."

ARE YOU SAVED ?

We have all read advertisements containing unsolicited testimonials to various types of pill in which the ghastly symptoms of various people are described in great detail before a paragraph of superlatives in praise of the said pill. We have all, on many occasions, been asked if we were saved, but seldom have I seen a public recantation in favour of employing an architect. The following letter appeared in the Yorkshire Post for December 18:—

18th December, 1952

Sir,

There is nothing to equal practical experience, especially when it touches one's pocket.

I, too, until quite recently, believed myself to be sufficiently capable to dispense with the services of a qualified architect, drawing and obtaining approval of my own plans and similarly placing the contracts. I learned better, to my sorrow and cost.

Not only did the final accounts received from certain contractors show no resemblance to their original estimates, but some of the quality of the materials and workmanship left a lot to be desired.

The differences were so serious, ranging from 100 per cent to 150 per cent or more above the quotations, that I was compelled ultimately to enlist professional services to obtain reasonable charges.

Such difficulties would never have arisen had I engaged a practising architect at the outset.

Your readers would be well advised to profit from my unfortunate and costly experience and realize that there is much more to it than mere plan drawing. One may be artistic, but this in itself is no safeguard against all the likely pitfalls involved in the execution of the work.

The moral is: "Live and Let Live" and "Every Man To His Own Job."

Yours, etc.,

Non-Architect.

The R.I.B.A. might consider founding a Gold Medal for clients.

A B N E R

THE LATE ROBERT ATKINSON

The death of Robert Atkinson on Boxing Day has come as a great shock after the earlier news that he was recovering well from an operation. But a brief illness followed which he was not strong enough to combat. R. A. exemplified to the highest degree the idea of the teacher-practitioner, an idea on which the A.A. School was founded. During the years 1912-1924 during which he was principal, he was an inspiring lecturer whose sincerity and love of his profession made a lasting impression on those who were privileged to sit at his feet.

He was a very fine colourist and draughtsman, a connoisseur of architectural books and collector of furniture and pictures. The Victoria and Albert Museum has benefited from his collection of English brass.

In the painted wall hanging by Hubert Clist and R. E. Enthoven that for years decorated the wall of the A.A. dining-room and depicted the A.A. staff of that time as gods on Mount Olympus, R. A. was the Zeus. This truly reflected what all members and students felt about him.

Robert Atkinson has designed many distinguished buildings, all of which bear the mark of his individual qualities, but they do not quite come up to the high expectations that his lectures gave one to hope for. This, however, is by way of a tribute to his remarkable personality rather than a criticism. His loss to architecture will be very great.

NEWS OF THE WEEK

New Year Honours

Baronet: Sir Ernest Pooley, K.C.V.O., Chairman of the Arts Council of Great Britain.

Knights Bachelor: William Graham Holford, Professor of Town Planning, University College, London. William Henry Pilkington, Chairman of Pilkington Brothers, Ltd., Vice-President, Council of Building Material Producers. Herbert Read, D.S.O., M.C., President, Institute of Contemporary Arts. William Oliphant Hutchison, President Royal Scottish Academy (Mr. Hutchison painted the portrait of Mr. A. Graham Henderson, P.P., R.I.B.A., for the R.I.B.A.). Robert Bruce Wycherley, M.C., Managing Director, Abbey National Building Society.

C.B.E.: Ove Nyquist Arup, Architectural Engineer; Maurice Bantock Blackshaw, A.R.I.B.A., Superintending Architect for Housing, Ministry of Housing and Local Government; Frederick Jonathan Bywater, M.C., Chairman, Council for Codes of Practice for Buildings, Construction and Engineering Services.

O.B.E.: Arthur Bates, M.T.P.I., County Planning Officer, West Riding of Yorkshire County Council. Walter Fullarton Lownie, lately Deputy Chief Architect and Surveyor, Department of Agriculture for Scotland. Arthur Eric Linton Robey, lately President, Building Industry Distributors. Frederick William Atkinson, Chief Clerk of Works, Ministry of Works. Walter John Gulliver, Inspector of Works (Buildings), Shawbury Section Office, Air Ministry; Brevet Col. Maurice Kershaw Matthews, T.D., D.L., F.R.I.B.A., F.R.I.C.S., Chairman, London Trustee Savings Bank.

Making Best Use of Housing Accommodation

Mr. Harold Macmillan, Minister of Housing and Local Government, has appointed a further sub-committee of the Central Housing Advisory Committee under the chairmanship of Mr. Henry Brooke, M.P.

The terms of reference are "to examine local authorities' existing practice and experience with regard to (a) the exchange of tenancies, and (b) the fixing and review of rents and the granting of rent rebates in respect of their houses and flats; to consider, in the light of the results of that examination, what more could be done towards securing the best use of existing housing accommodation, whether in local authority ownership or otherwise; and to make recommendations."

The other members of the sub-committee are: Sir Harold Bellman, M.B.E., J.P.; Mrs. E. Gooch, J.P., C.C.; Mr. P. L. Leigh-Breese, J.P., F.I.Hsg.; Lady Megan Lloyd George; Mr. G. S. McIntire, O.B.E., M.A., LL.B.; Mr. K. Marr-Johnson, F.R.I.C.S.; Miss D. E. Niskin, B.A., F.S.H.M.; Mr. A. R. Stamp.

Housing authorities and other interested organizations and individuals wishing to submit evidence to the sub-committee are invited to write to the joint secretaries: Miss M. M. Wilkins, Miss M. Empson, Ministry of Housing and Local Government, Whitehall, S.W.1.

National Parks Commission

Mr. Harold Macmillan has re-appointed Sir Patrick Duff Chairman, and Lord Lawson Vice-Chairman, of the National Parks Commission for a further period of two years.

The other members of the Commission have been reappointed for a period of one year with the exception of Sir Ifan ab Owen Edwards, who did not wish to be considered for reappointment. Other appointments are under consideration.

The membership of the Commission will therefore be as follows: Sir Patrick Duff, K.C.B., K.C.V.O., Chairman; The Rt. Hon. Lord Lawson, D.C.L., Deputy Chairman; Alderman J. V. Allen, J.P.; Mrs. John Dower, J.P.; Professor R. C. McLean, M.A., D.Sc., F.L.S.; Lord Merthyr, T.D., M.A., J.P., D.L.; Francis Ritchie, Esq.; Tom Stephenson, Esq.; Sir William L. Taylor, C.B.E., F.R.I.C.S.; The Secretary of the Commission is Mr. H. M. Abrahams.

Plewland House, South Queensferry

The uncertainty of the future of Plewland House, South Queensferry, which is a good example of traditional Scottish domestic architecture, has now been settled. The thanks are due to both the Pilgrim Trust, who have made a most generous offer of £4,000 towards the cost of restoring the house, and the National Trust, who are to take over the house and restore it for housing accommodation, at a cost of £1,500. A public appeal is to be launched to raise this sum.

The architects for the restoration are Basil Spence and Partners, Edinburgh.

R.I.B.A. Library Group

The next meeting of the Library Group will take place on Monday, January 12th, at 6 p.m., at Sir John Soane's Museum, 13, Lincoln's Inn Fields, W.C.2. The evening will be devoted to a study of drawings possessed by the Museum, and the collection will be introduced by the Curator, Mr. John Summerson, C.B.E., F.S.A., A.R.I.B.A., who is Chairman of the Group. Drawings by John Thorpe, Wren, Chambers, the Adam brothers and George Dance will be on view.

PARTNERSHIP

Mr. Vincent Burr has great pleasure in announcing that, as from January 1, 1953, he has taken into partnership his two associated architects, Mr. Edmund G. Harker and Mr. John J. Hickie, and that his firm will now be known as "Vincent Burr & Partners."

The practice will continue to be carried on at 85, Gower Street, London, W.C.1.

COMING EVENTS

The Institution of Sanitary Engineers

January 13 at 6 p.m. "Waterproofing of Concrete Structures," by Isaac Hopkins, M.S.E., M.I.Struct.E. (Associate Member), Chief Engineer, Quickset Water Sealers, Ltd., at Caxton Hall, Westminster, S.W.1.

The Institution of Structural Engineers

January 13 at 7 p.m. Joint Meeting with the Institute of Welding, Liverpool and District Branch—1951 Lark Medal Paper. W. R. Atkins on "Continuous Welded Structures, Abbey Works, Port Talbot." At the Lancashire and Cheshire Branch at the Liverpool College of Technology, Liverpool.

January 14 at 6.30 p.m. Joint Meeting with the Northern Architectural Association, at Northern Counties Branch, at the Neville Hall, Newcastle.

Incorporated Institute of British Decorators

January 14 at 6.30 p.m. A Lecture by Sir Hugh Casson, R.D.I., M.A., F.R.I.B.A., Arch., on "Architecture and the Decorative Arts," at the Building Centre, Store Street, W.C.1.

London Master Builders Association

January 14 at 2.30 p.m. Eleventh Annual General Meeting of Area No. 1 at Derry & Tom's Restaurant, Kensington High Street, W.8. The guest of honour at the luncheon will be the President, Mr. D. E. Woodbine Parish.

Society of Chemical Industry

January 15 at 6 p.m. "The Use of Rubber in Bituminous Road Surfaces," by A. R. Smee and L. Mullins, of The British Rubber Development Board and The British Rubber Producers' Research Association, at the Building Centre.

CORRESPONDENCE

Modular Co-ordination

To the Editor of A. & B. N.

Sir,—I would like to thank you for your thoughtful and understanding leader upon my recent Alfred Bossom lecture at the Royal Society of Arts, and to underline some of the things that you say.

As I was at pains to emphasize many times in my paper, modular co-ordination must be conceived in terms of all kinds of building construction, site work as well as factory production, the wet and heavy as well as the light and dry: the distinction between "traditional" and "non-traditional" building is unreal and should be discarded: the bad word beginning with P. should be avoided, as I avoided it in my paper.

I was glad of your support of my proposal of The Modular Society as a "small tail to wag a great dog." This happy phrase of yours goes straight to the point. For research we should continue to look to the B.R.S. and the N.P.L., for the elaboration and establishment of national standards to the B.S.I.; but in between these two functions, which are the beginning and consummation of a long process, there is a large area of field work in design and development and promotion in which the private enterprise of architects and other technicians and of manufacturers and contractors has a contribution to make that is different from that of the laboratory and the committee-room, but indispensable for the progress of the art. It is to make this contribution effective that we are planning to establish The Modular Society and hope to call the inaugural meeting early in the New Year.

I am, etc.,
M. HARTLAND THOMAS.

B.R.S. Economies

To the Editor of A. & B. N.

Sir,—Unless the Lord President of the Council changes his mind, the second stage of the staff economies at the B.R.S. will be put into effect in the very near future. Twenty-two members of the staff, including thirteen attached to the building operations research unit, will receive notices of dismissal.

Whilst nobody would pretend that expenditure on building research should not be subject to the same scrutiny and control as any other Government spending, the present policy, at a time when everyone is endeavouring to reduce the cost and increase the speed of building, is surely the height of inconsistency and certain to cost the country ultimately far more for many years to come than the immediate annual saving of a few thousand pounds.

The cuts have been deplored by the R.I.B.A., the T.U.C. and the N.F.B.T.O. and each of these powerful interests has, at the instigation of the Association of Building Technicians, expressed concern to the Government. What has not been emphasized sufficiently is the invaluable potentialities of the B.R.S. and particularly the operational research unit to the builders themselves, but no protest appears to have come from this quarter.

Builders have so often been accused of a negative and reactionary attitude to new methods, research, etc. They now have a splendid opportunity to show that these accusations are without foundation. It would also encourage both the professions and the trade unions, and not fail to impress the Government, to learn that they have made their protests and the industry was unanimous in its opposition to these shortsighted economies.

I am, etc.,
F. E. SHROSBREE,
General Secretary, A.B.T.

London Builders' Conference

The London Builders' Conference, which last month suspended its "fair-price" scheme which the Minister of Works, Mr. David Eccles, said was bound to limit competition and raise costs, has turned down the idea of an inquiry into its operations by the Royal Institute of British Architects.

Sir Alfred Hurst's letter is printed below.

* * *

The Secretary,
Ministry of Works,
Lambeth Bridge House, S.E.1.
December 30, 1952.

SIR,—The Council of the London Builders' Conference have considered your letter of December 16, and in this connection have also had before them the report in *The Times* of December 22 of correspondence between the Minister of Works and the President of the R.I.B.A.

From these letters it would appear that the body to be charged with the responsibility, *inter alia*, of judging how far the attacks made upon the Conference in the House of Commons on November 7 last were justified is not, after all, to be any obviously impartial authority like the Monopolies Commission nor even a tribunal specially constituted by the Minister himself from the building industry, but is to be a committee set up by the R.I.B.A. in consultation with other organizations primarily to review building costs and contract procedure.

In reply I am instructed to state that in view of the fact that the Council of the R.I.B.A. have over the past 14 years repeatedly expressed their disapproval of the Conference and, incidentally, have refused all invitations even to discuss the problems which they are now asked to take the lead in solving, my Council could not regard any Committee appointed by them as an impartial, nor even an authoritative tribunal to review the activities of the Conference and they would not be prepared to appear before it on this issue. Moreover, my Council are confident that in this they would have the support of all fair-minded people.

But in saying this they would make it clear that they do not question for a moment the desirability, indeed the urgency, for "the industry itself under the leadership of the architects to take active steps to reduce costs and to review contracting arrangements." Over eight years ago the Simon Committee reported (page 70):—

> "6. Though we have not attempted to examine in detail the working of trade associations which attempt to regulate the prices of building materials and specialists' work, we are of opinion that in the post-war sellers' market these trade associations will together exercise far more influence over the cost of building than an association of builders such as the London Builders' Conference."

The members of the Conference, as main contractors, have had unrivalled experience of the extent to which the cost of building to-day is increased, both by the elimination of competition and in other ways, by the action of many of the sections making up this highly complex industry, and they would be prepared to give wholehearted co-operation in any really comprehensive investigation.

My Council are glad to receive the Minister's consent to the publication of this correspondence and they are giving directions accordingly.

I am, Sir,
Your obedient Servant,
ALFRED HURST.

The following letters have been exchanged between the Minister and the P.R.I.B.A.:—

Howard Robertson, Esq.,
M.C., A.R.A., F.R.I.B.A.,
The Royal Institute of
British Architects.
December 5, 1952.

MY DEAR PRESIDENT,

As you are aware, during the past months there has been a marked improvement in the output of building. Nevertheless, there is widespread concern about the level of building costs; and there has recently been criticism of the contracting methods employed by the industry and apprehension about the existence of restrictive practices.

It seems to me that these circumstances constitute at once a challenge and an opportunity. In my view the time has come for the industry itself, under the leadership of the Architects, to take more active steps to reduce costs and review contracting arrangements. With the assurance of plenty of work to come, there is every reason for developing contracting arrangements which on the one hand will encourage the proper pre-planning and organization of the work, and on the other will ensure a proper measure of healthy competition.

You have indicated to me that the Royal Institute of British Architects is prepared to take the lead with the other organizations representing the industry in promoting measures directed towards these ends. In this connection I understand that consideration will be given to the views and experience of Government contracting Departments and of local authorities who are directly interested in a great deal of the work of the building industry. I am therefore writing to assure you of the warm encouragement and support of Her Majesty's Government in the steps you are taking. You may also be assured that my own good offices and those of the Ministry under my control will be at your service.

Yours very sincerely,
DAVID ECCLES.

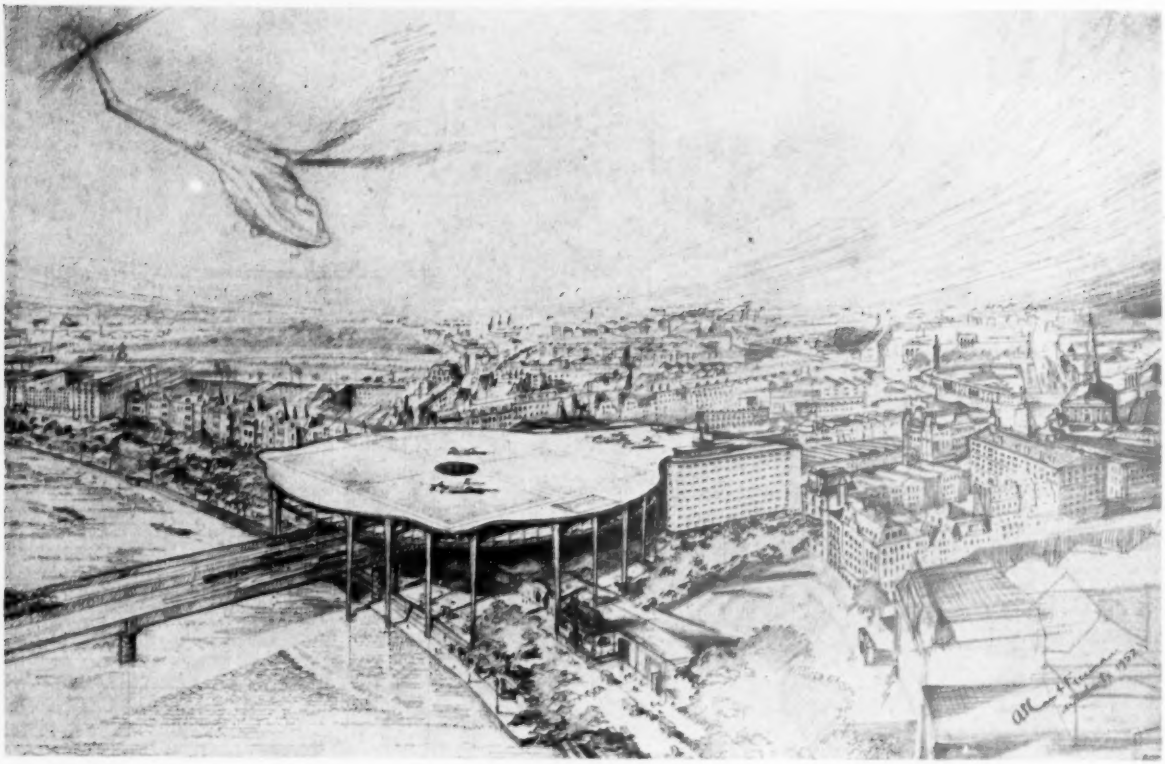
The Right Hon. David Eccles, M.P.,
Ministry of Works,
Lambeth Bridge House,
S.E.1.
December 9, 1952.

MY DEAR MINISTER,

Thank you for your letter of December 5, which will be read to my Council at their meeting this afternoon.

We shall be very happy to take the lead in this important matter and I am most grateful for the encouragement and support of Her Majesty's Government, and for the assurance of your own good offices and those of the Ministry.

Yours very sincerely,
HOWARD ROBERTSON.
President.

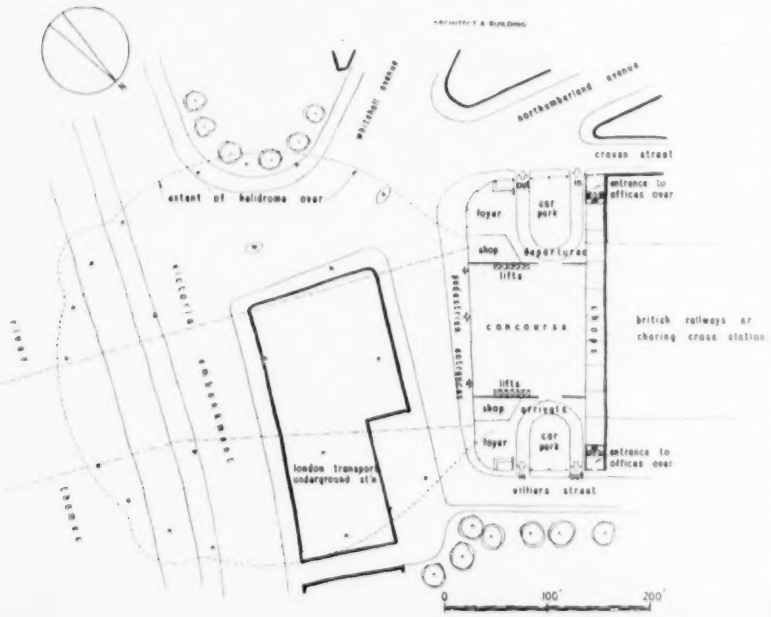


PROPOSAL FOR AN INTERNATIONAL HELIDROME AT CHARING CROSS

by Messrs. Aslan & Freeman, A/A.R.I.B.A., A.M.T.P.I.

A PRELIMINARY scheme for a helidrome for London was designed by Messrs. Aslan & Freeman following a suggestion by Mr. Norman Dodds, M.P., who introduced the proposal to the House in May, 1951. That particular scheme was studied by the Parliamentary Secretary to the Ministry of Civil Aviation, who reported back to Mr. Dodds in July of 1952 that his department had investigated the scheme and that it was "their view that it would be possible from the engineering and operational point of view to build a helidrome on the site," but the "first design would require considerable modification."

The following is a description, with Illustrations, of the redesigned scheme which embodies the suggestions and meets the criticisms of the Ministry.



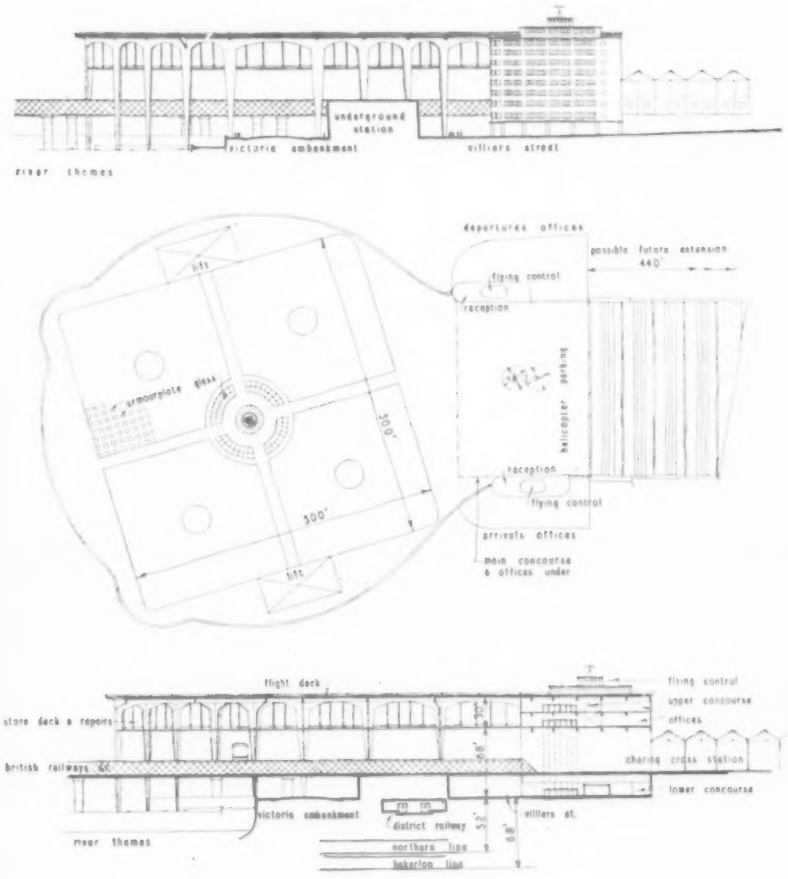
OPERATIONAL

(a) Layout. The proposed international helidrome is designed to cater for several helicopters to load and unload simultaneously with two "Runways" for landing and take off, each acting independently from the other.

Each runway is 300ft long and 150ft wide (complying with the requirements of the Inter-Departmental Helicopter Committee) and together they form a square 300 x 300ft. This square is quartered into 4 smaller squares of 150 x 150ft to arrange landings and take-offs in any direction.

The Helidrome is circular in shape to allow parking spaces around the runways—including two full size lifts to take machines to the hangars below for servicing—and to give aesthetic shape to this gigantic building which will be one of the landmarks of the Metropolis.

Arrival and Departure platforms are placed respectively on the N.E. and N.W. of the Helidrome, each being adjacent to a reception hall. Between the two platforms is a large



Arrival and Departure Reception and Controls Rooms are placed on the top of these two blocks.

apron where Helicopters will park and taxi to and from the runways to land and take off passengers and mail. The Control Rooms are designed over the Reception Halls thus commanding an uninterrupted view all round.

North of the arrival and departure platforms is Charing Cross Station. This end of the Helidrome has been left unobstructed for possible extension over the station itself, should the future necessitate such expansion.

(b) Internal Connections. The Arrival and Departure reception halls, dwarf buildings situated away from the runways, are connected directly to their own customs, passport and other departments, but ultimately discharge into a large concourse below the helidrome level where all services and amenities such as Restaurants, Shops, Information, Post Office etc., are planned.

From this concourse express lifts take down passengers directly either to the main railway station or to any of the 3 underground stations (District, Northern and Bakerloo Lines) and to the arrival or departure drives where Taxis and Private cars will be awaiting in the car parks in both Villiers Street and Craven Street. From here pedestrians have direct access to Victoria Embankment and the Strand.

(c) Location. The Helidrome is sited over the junction of Charing Cross Railway Bridge and Victoria Embankment. This position gives an unobstructed access to the Helidrome from the N.E. (Victoria Embankment Gardens and the River) East and South (The River) and S.W. (The gardens to Whitehall Court) and N.W. (The West End). The Helidrome will cover mainly the railway bridge now spanning over the lower end of Villiers Street, while the two segments at N.E. and S.W. project over the Embankment and a small part of the Eastern segment will just overlap the river. When completed the Helidrome will have more or less free unrestricted approach all round.

CONSTRUCTION

The Helidrome is designed as a permanent structure. The main platform to be some 98 feet above street level and constructed of stressed reinforced white concrete slab, with armour plate glass and ventilation grilles in order that the covered areas will have ample light and air.

The platform will be mounted on slender R.C. columns and either taken straight down to suitable bases in the ground or supported by an arch spanning the railway lines or the main traffic lane on the Embankment.

Hangars and workshops to be on the lower platform connected to the runway with lifts and staircases.

BUILDINGS

At the junction of Craven Street and Villiers Street with the Helidrome, 2 blocks of buildings are designed each 9 storeys high, rising vertically up to the level of the runways. The ground floor to these blocks is planned as a "Drive In" for Taxis and Cars for arrival and departure and leading into a common reception hall with express lifts taking passengers to the main concourse on the eighth floor where the Helidrome formalities are carried out. 1st to 7th floors will be offices and stores of the Helidrome connected through its own private entrance and lifts.

AMENITIES

The advantages of having a Helidrome at Charing Cross are many. It is in a central position to the City and West End with excellent connections to every part by road, rail and underground. The river will be the finest land mark to approaching helicopters, even should the radar system fail.

COSTS

The matters of cost at this stage has not been gone into although it will be high. However, such a project now is an urgent necessity to London and London cannot afford to be without it.

NOISE PROBLEM

Noise has always been an important factor to be considered in the planning of the helidrome.

The maximum noise which will affect the areas adjacent to this helidrome will be that of an aeroplane or helicopter flying at high level.

Noise such as that developed during the recent experimental landings and take-offs at the South Bank will not apply here; as the machine will never come down to the level of the neighbouring buildings and will always fly at a considerable height above the roofs.

When the helicopter is over the helidrome most of the sound waves (noises) radiating downwards vertically or at an angle will strike the huge surface of the platform (flat, hard and smooth surfaces of concrete and glass) and will be immediately reflected upwards. The nearer the helicopter to the helidrome and the platform, the more the reflection of the sound waves will be.

The maximum sound waves will develop when the machine is taking off from the runway and immediately after it leaves it. Here the sound waves will mostly affect the structure, particularly the area immediately under the runway which has been specially planned as hangers and workshops for the helidrome in order that it will act as a pocket to receive the sound waves, thus freeing the lower areas from the noises.

However, the construction of the helidrome, and particularly the inner surfaces of the lower platform, will be acoustically treated so as to absorb and kill these noises.

Special Course of Lectures on Model Byelaws

A special course of four lectures on the new Model Byelaws will be given at L.C.C. Brixton School of Building, Ferndale Road, S.W.4, on Tuesday evenings, commencing on February 10 at 6.30 p.m. The lecturer, Mr. R. A. Simons, was one of the technical officers serving the Committee preparing this new edition of the Model Building Byelaws and is, therefore, in an excellent position to indicate the intentions underlying them.

The course will treat the byelaws from the technical aspect and will go through the new model dealing specially with the features in which it differs from the old. The fee for the Course is £1, and applications for admission should be made by letter to the Secretary of the School, stating name and address, position held and particulars of technical qualifications.

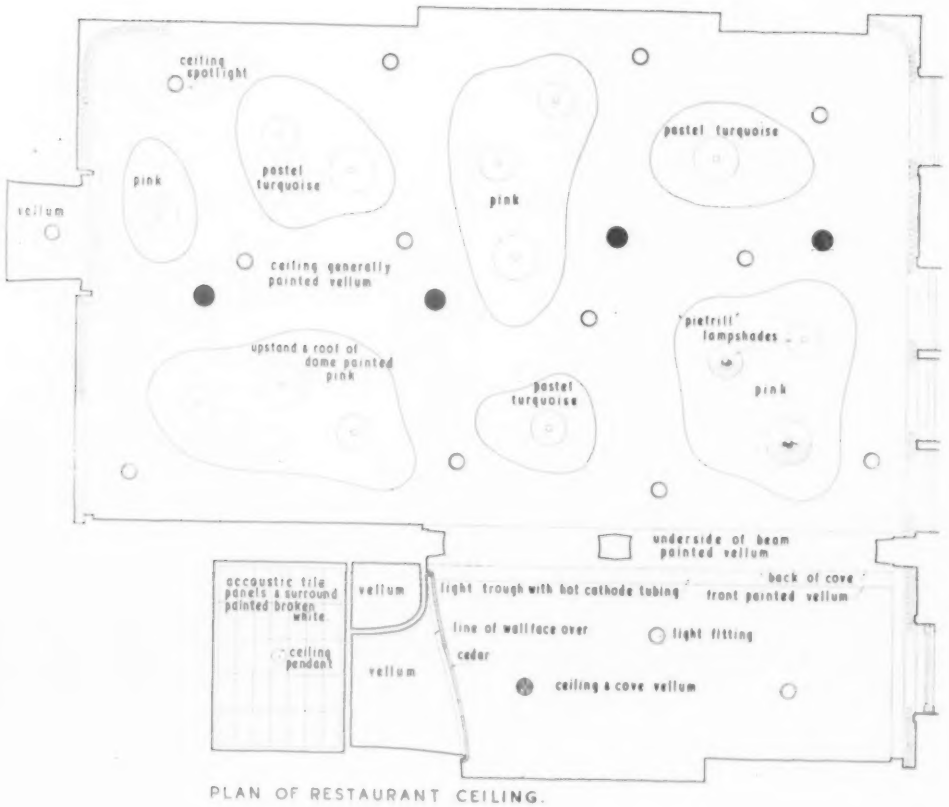
The CARDINAL Restaurant

GRAND HOTEL, BIRMINGHAM

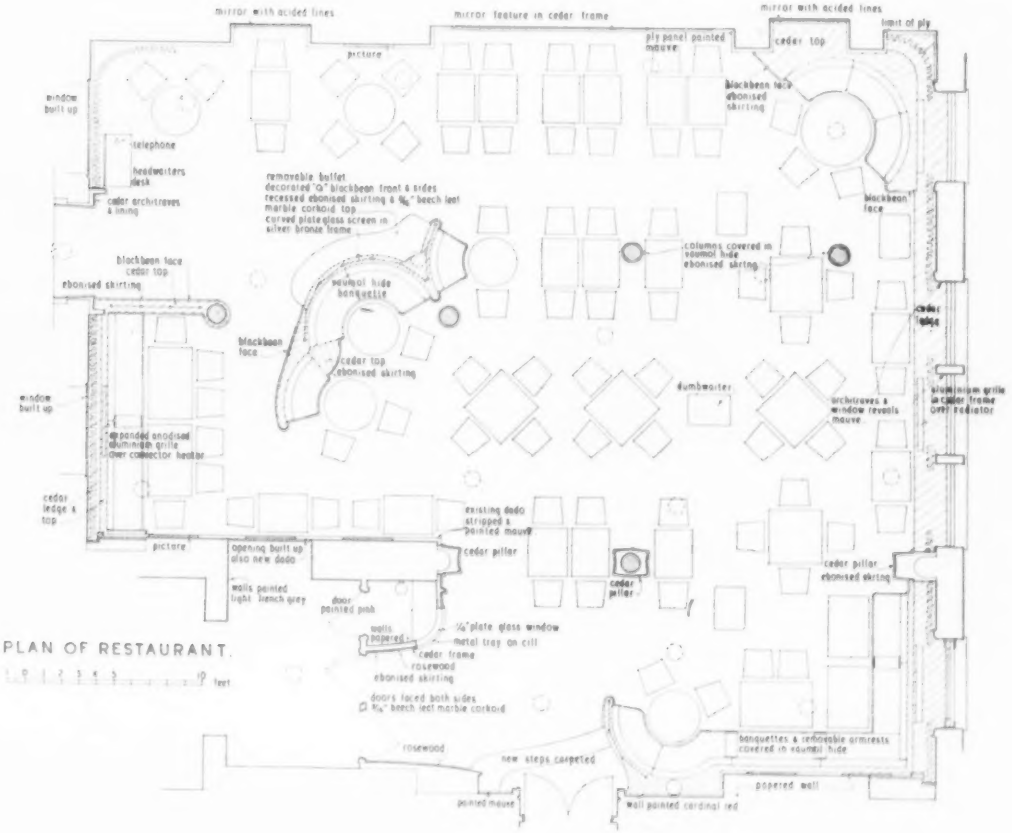
ARCHITECTS
EASTON & ROBERTSON

THE Architects were asked to design a new restaurant and a new reception room for the use of both hotel guests and outside patrons. The Hotel Management felt that there was a definite need for a restaurant of the luxury type in central Birmingham, where there is a heavy potential lunch-time trade. The Grand Hotel caters for a large

(Continued on page 40)



PLAN OF RESTAURANT CEILING.



PLAN OF RESTAURANT.

0 1 2 3 4 5 10 feet

Viewpoint 1, before alteration

The same after alteration

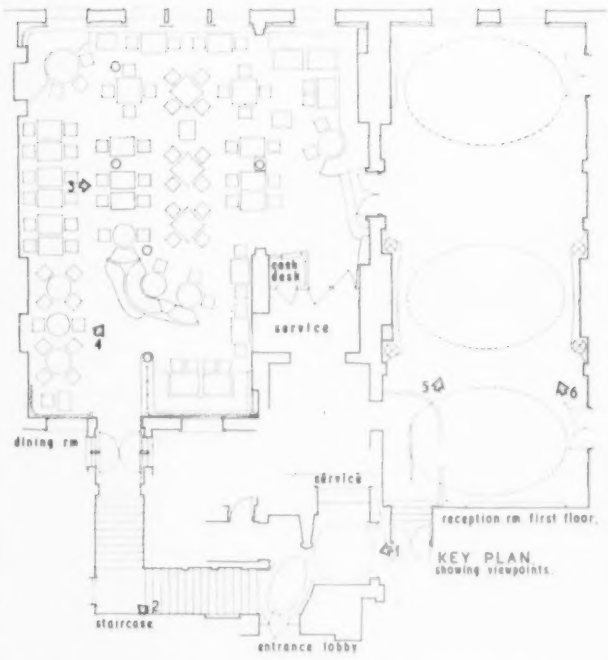
Continued from page 38

number of private functions of all kinds, and the new reception room was to form a modern addition to the several suites of rooms already available for this purpose. It was also to be used for the serving of breakfast, and had, therefore, to strike a cheerful, welcoming note.

Two existing rooms on the first floor of the Grand Hotel were allocated for the conversion. The one, to be named the Cardinal Restaurant, was previously used for a variety of purposes, being almost entirely devoted to functions, meetings and the like. It is approached by its own staircase, and has more or less direct access to the street. The other, now known as The Coronation Room, played a similar role, and can be approached either from the main Hotel Entrance or through the new restaurant. The existing waiters' service arrangements were adapted to meet the new requirements. These were somewhat more extensive than previously, and a form of one-way traffic was instituted to reduce congestion at busy periods.

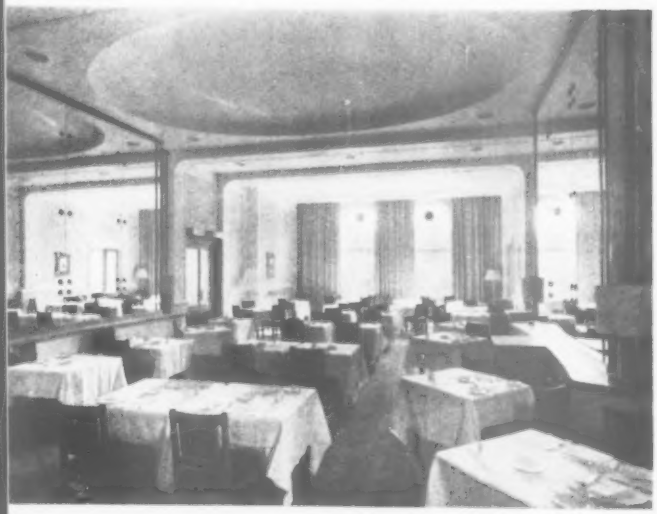
The Cardinal Restaurant is used for luncheon and dinner, and is not available for private functions. The Coronation Room serves breakfast only, after which it is turned over to the Banqueting Department of the Hotel. Permanent seating is installed only in the restaurant, the other room being laid out as required. In a particularly busy period, such as, for example, during the British Industries Fair, the overflow from the Cardinal Restaurant can be seated in the Coronation Room.

The entrance lobby and staircase form an important prelude to the Cardinal Restaurant, and it was felt that it warranted special attention. Circular and elliptical shapes were built up, reducing the height and giving a sense of direction up the staircase, as well as providing an effective screen to the adjacent cloakrooms. The walls are lined with peach-coloured rexine, the woodwork is natural beech and the domed ceilings formed in fibrous plaster. A wallpaper with green, yellow and pink stripes is hung on the staircase walls, and the cardinal red staircase carpet continues through up into the restaurant.



The available space for the restaurant consisted of an "L"-shaped room, dotted with Corinthian-capped columns, and the ceiling criss-crossed with heavily corniced beams. A new fibrous plaster sub-ceiling was introduced, with abstract shapes in the form of recessed domes, so placed to help to disguise the original position of the ceiling beams. The complete ceiling was prefabricated in the contractor's workshops; the essence of the whole job was speed and it was completed in ten weeks. The main lighting consists of

Viewpoint 5, before alteration



Viewpoint 6, after alteration

recessed spotlights, with pleated paper shades in the domes, which are painted alternately pink and turquoise.

The columns were stripped of ornamentation, and covered with beige-coloured hide; this is hard-wearing and renders the columns unobtrusive. The original dado panelling was retained, stripped and painted a pale mauve; above this the walls were papered in a trellis-pattern wallpaper in grey and white. Extensive use of full-length hanging curtains in a self-patterned, champagne-coloured material helped hide some of the less pleasant original features, and entrance and service doors were rejuvenated by the introduction of new architraves and canopies in cedar and blackbean. Cedar, blackbean and mahogany were used for the furniture, and the curving front of the new cashier's box veneered in rosewood. Panels of a recently introduced embossed plywood were employed to face the buffet, dumbwaiters and headwaiter's desk.

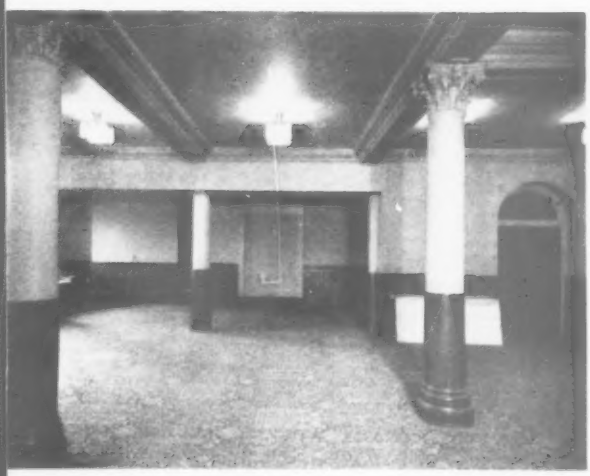
The carpet is self-patterned and cardinal red in colour; the chairs upholstered in green hide. A certain amount of fixed seating in the form of banquettes was introduced; this helps to give the room a calm appearance, as it forms islands around which the movable chairs and tables can be grouped. A set of antique tinsel prints in the original maple frames are disposed about the walls; the tinsel glitters and gives a sparkling appearance.

The Coronation Room has the advantage of added height and being free from internal columns. A fibrous plaster sub-ceiling is also used here, large elliptical domes being recessed into it. The room is lit by recessed ceiling spot lights, supplemented by floor and table standards.

The existing fireplaces were removed, the chimney breasts then being covered with continuous mirror panels in both white and pale blue mirror. These features are exactly opposite one another, giving an "infinity" effect. The walls were originally divided into panels; the mouldings were cleaned up and painted; the panels redivided where necessary and filled with a deep pink wallpaper. The walls and ceiling are painted ivory, the domes being picked out in peach.

The carpet is basically pale green; it is self-patterned, with alternating white stars in it. The curtain track is recessed into the ceiling, and the full-length hanging drapes are in self-patterned material, champagne coloured.

The service screen has a sliding door and is covered in similar peach-coloured rexine to that used in the entrance lobby. Table tops are covered in Warerite, and the wood used throughout was cedar.

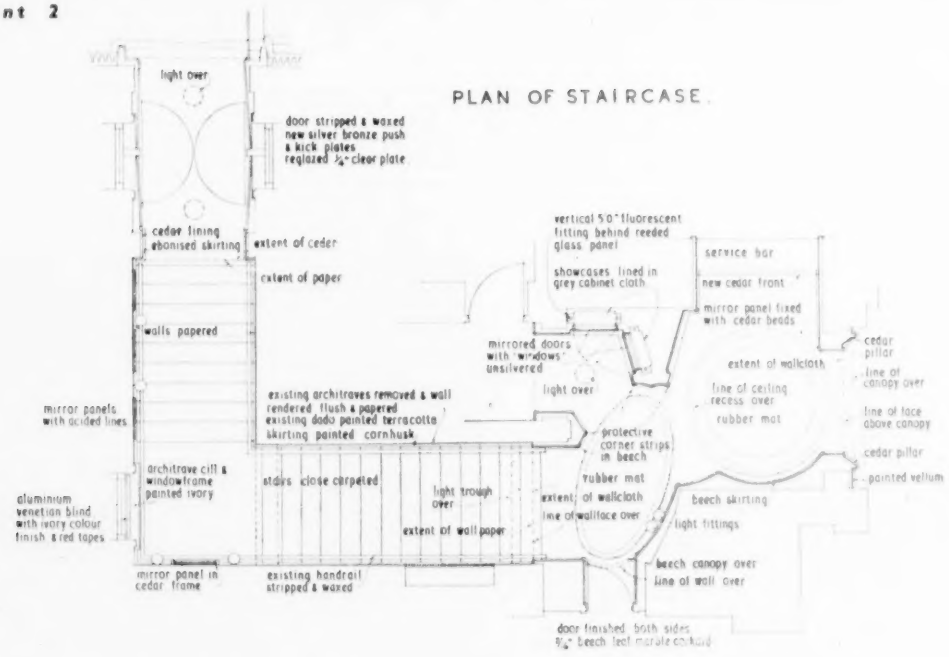


Viewpoint 3, before alteration

Viewpoint 4, as it is now

Viewpoint 2

PLAN OF STAIRCASE



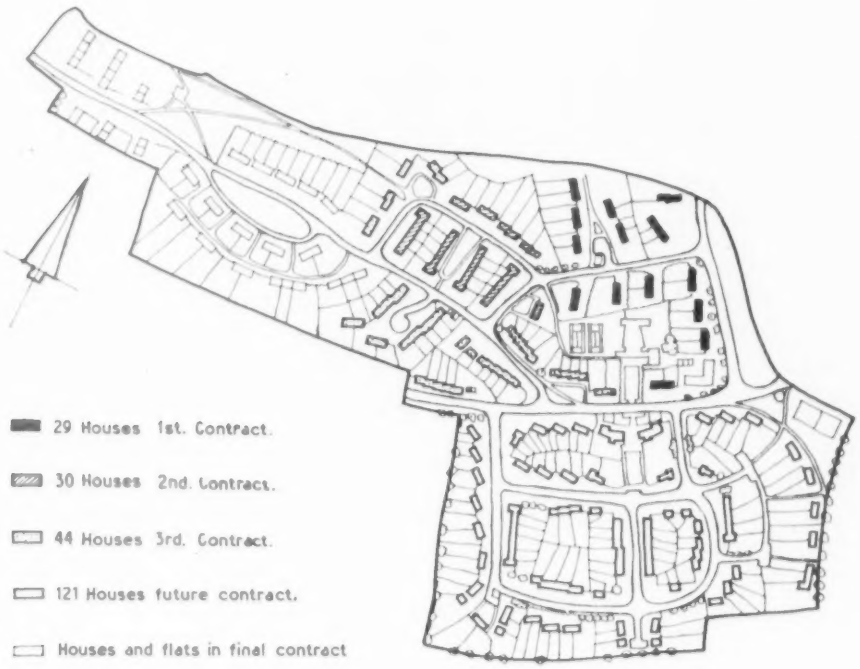
THE CARDINAL RESTAURANT GRAND HOTEL, BIRMINGHAM

General contractor: H. H. Martyn & Co., Ltd., Cheltenham. (Part of The Maple-Martyn Organization.)

The Landscaping of a Housing Estate

CHANTRY ESTATE, BILLERICAY

ARCHITECTS: PAUL MAUGER & PARTNERS



Viewpoint from point D on plan on page 44

THE London Co-operative Housing Society acquired this estate of considerable scenic value immediately to the East of the town; the land slopes down about 100 feet from the High Street and commands a fine view. The site plan shows how it is proposed to develop the estate with some 280 dwellings, of which 29 are occupied, 30 nearing completion, and 44 about to be started. The completed scheme includes flats and maisonettes of three storeys, flats and houses of two storeys, the old people's bungalows, and it is hoped that a Community Centre with Tennis Courts may later be provided. A corner site has been reserved for a London Co-operative Store, and a small barn in a farmyard on the site, associated locally with the Pilgrim Ship Mayflower, may be re-erected on the upper part of the area as a little belvedere facing a fine view to the East.

As Housing Societies receive the State but not the Local subsidy on

[Continued on page 46

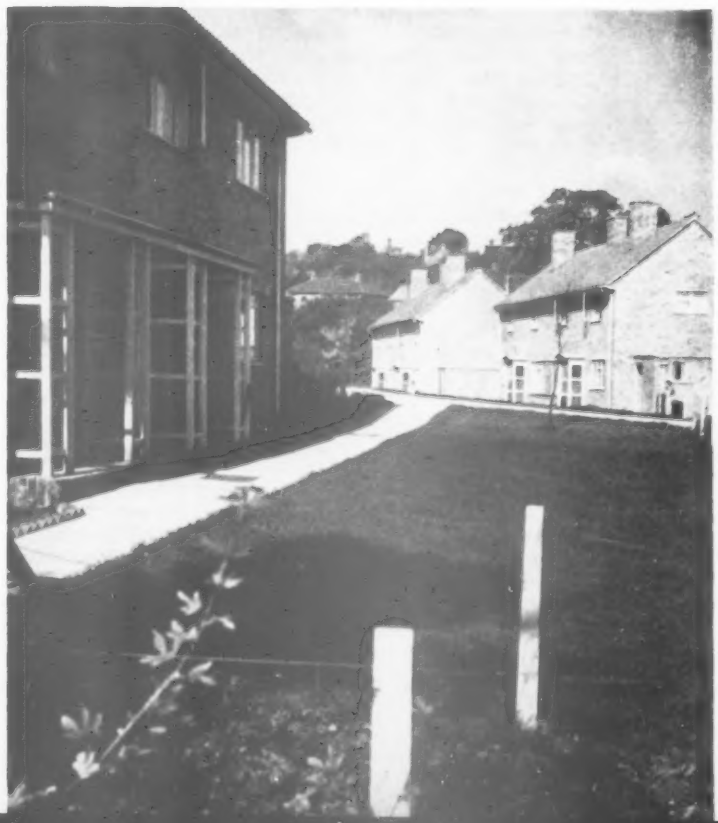
Chantry Estate Billericay

from Viewpoint A

H. Carpinus Betulus (Hornbeam)
W. Salix Babylonica (weeping Willow)
L. Laburnum Vasii
PY. Pyrus Aldenhamensis or Purpurea
PR. Prunus Amygdalus (Almond)
Hedges
Division between public and private glass
Flower beds

from Viewpoint B

from Viewpoint E



from Viewpoint C

Continued from page 43]

their houses, the rents they have to charge are necessarily higher than those paid by Council tenants for the same type of houses. Herein lies the particular problem in creating satisfactory estates for Housing Societies, for unless their houses can offer something in their planning, equipment and environment which nearby Council houses do not offer, there may be difficulty in keeping them fully let when once the present housing shortage has been made good.

Experience in Hampstead Garden Suburb and Welwyn Garden City shows that a pleasant setting for daily life tends to enhance values, and it is noteworthy that good siting and public gardening and tree planting have in these areas been well considered and the most has been made of any natural landscape advantage offered by the site.

The Society's estate, with its steepish sloping surfaces, old hedges and forest trees, presented fine opportunities in these respects, and the Committee of Management readily agreed to the Architect's suggestions that the most should be made of them. Open front gardens, grass sown and planted with flowering trees under the building contract, were to be adopted, and the existing trees and hedges maintained.

The Architect was asked to try to interest the early tenants in these ideas, and in particular to encourage them to look after the open fronts and do such additional flower gardening to them as they, in consultation with him, might wish.

The photographs show the early results of this experiment, in which the tenants of the first 29 houses have entered with enthusiasm. The earliest tenants at the north end of Daines Road took a real interest in the matter, and some of them obviously felt that they, as pioneers, could influence the gardening standards of the whole estate.

It will be seen from the planting diagram that the new trees are of the smaller flowering varieties; this was because most of them serve as screens to private gardens planted near the houses. They were chosen also to act as a foil to the large forest trees, so enhancing their scale.

Another unusual feature of front gardens of this sort, in which the individual tenant has the final say as to size and, up to a point, in the position of flower beds, is that planting is likely to differ from pair to pair.

To enable the architectural setting of the gardening shown in the photographs to be visualized, it should be mentioned that the walling is of second yellow stock; the roofs of brown grey double Roman Cam Tiles; the windows of wood painted white and the porches of painted wood or of concrete with corrugated asbestos roofs, according to house type. The centre bay of the wooden porches consists of a flower bed and the roof boarding and felt are here omitted to encourage tenants to grow climbing plants. The colour of the painting of entrance doors, etc., is of a cold and a warm colour, according to position.

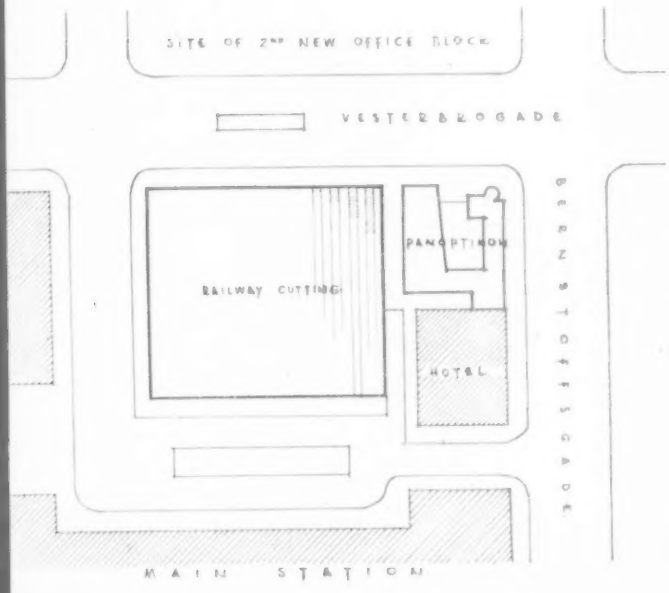
View from Hall Square

Panopticon Office Building

COPENHAGEN

ARCHITECTS: JORGEN MOGENSEN
AXEL PAULSEN

notes and photographs by
MYLES ASCOLI, A.R.I.B.A.



THE first thing one sees on coming out of the main railway station in Copenhagen is two new blocks of offices. One of these is Panoptikon. This is a modern block of offices which has caused quite a storm in Copenhagen, not because modern architecture is not accepted in Denmark, but because it cuts off the view of the Town Hall spire from Vesterbrogade, one of the main streets.

The position which this block now occupies formerly consisted of a row of classical renaissance buildings which housed a museum and offices. Either just before or just after the last war the lower part of the end of this row was modernized and converted into a bank. Now the classical style buildings have been demolished and a new block of offices eleven storeys high has been built in their place. This is now nearing completion.

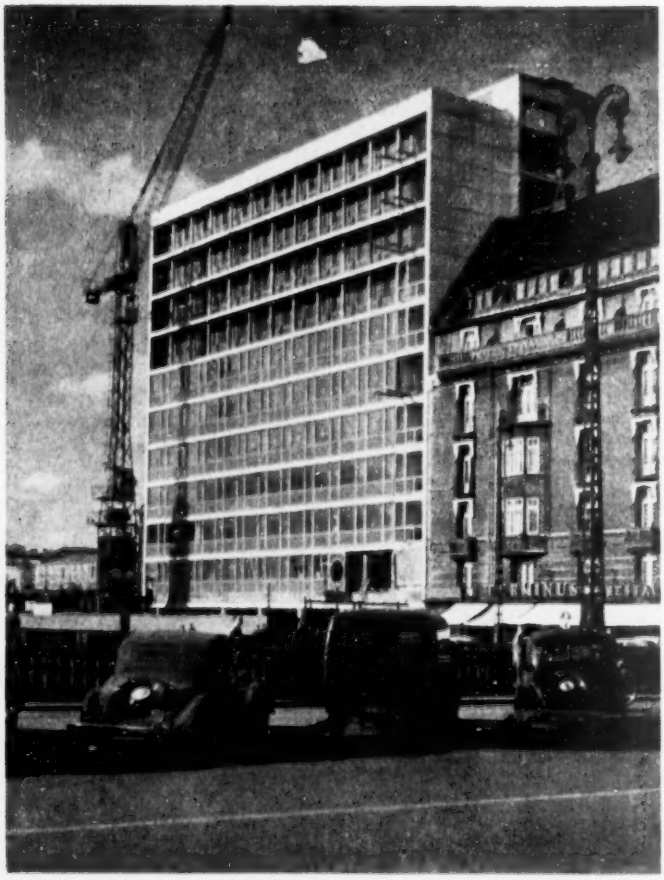
The new building has two basement levels. The lowest is a garage with a ramp down from the road. The upper level has storage space for 240 cycles, which is very necessary in Copenhagen where so many people cycle to work, and the existing strong rooms for the bank.

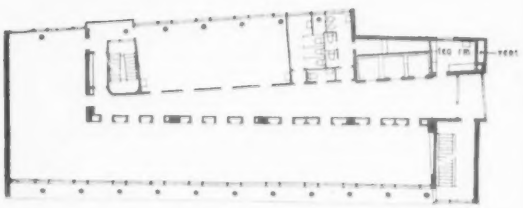
On the Ground Floor the existing bank remains unaltered except for the new concrete roof lights which are being inserted to light the back of the premises. The building is a reinforced concrete structure with the office accommodation starting at first floor level. This leaves the ground floor free for the open planning of shops and display windows.

On the wing facing on to Bernstoffsgade only one storey is built up over the bank. This contains conference rooms and offices for the senior bank executives. The main block, on the station courtyard side rises 11 storeys. This has a central corridor, wide at the end of the lifts and main staircase and narrowing towards the other end. The lavatory accommodation is on the courtyard side and the office space on either side of the corridor is left free so that partitions

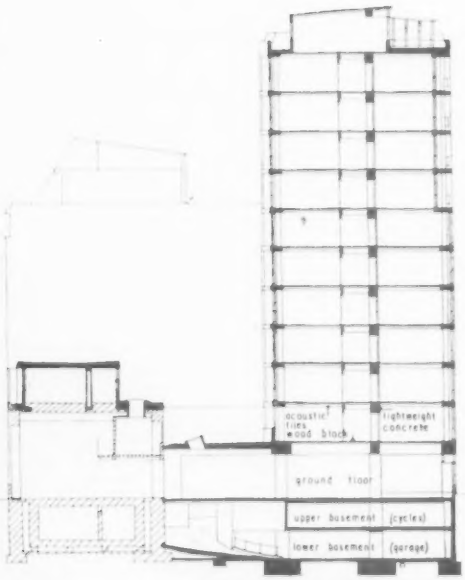
[Continued on page 49

Above : panel infillings, double glazing, solids of foam concrete insulating blocks faced externally with metal sheet with enamel finish. Below : view of Panopticon from entrance to main station showing type of old building which the new block is replacing.



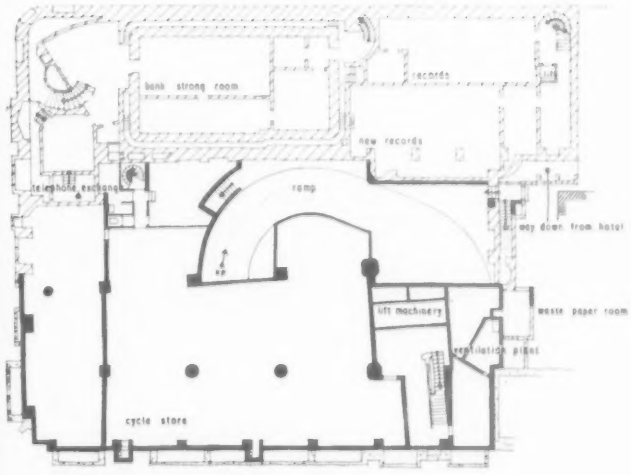


typical floor plans 7 - 10

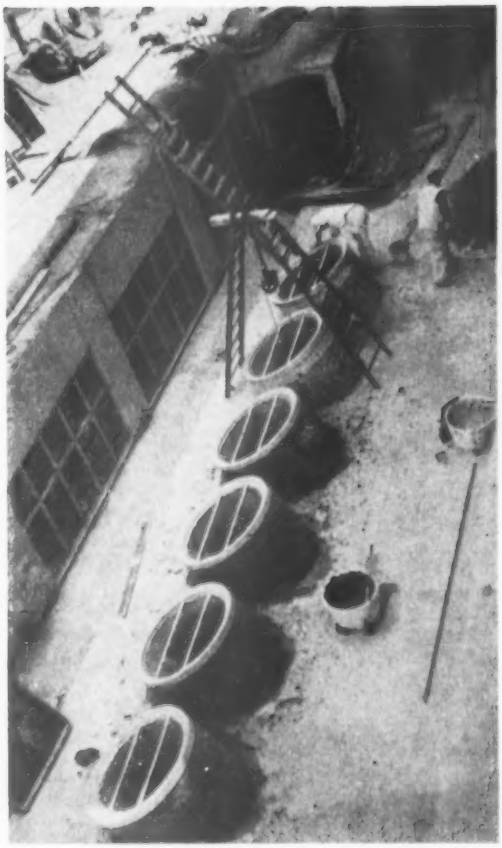


typical floor plans 1 - 6

ground floor plan



upper basement



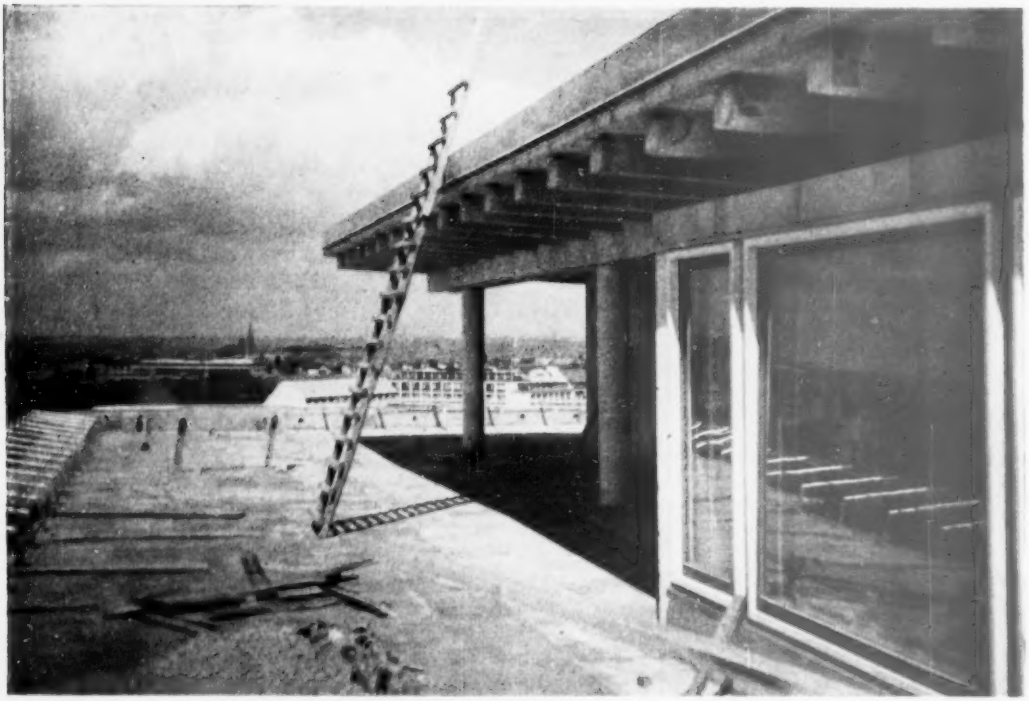
Concrete roof lights to light rear of existing bank premises

Continued from page 47

can be erected to suit individual requirements. At the end of the corridors there is a large open space through the whole width of the building which can be used as a larger office or conference room. The plan is standard through the whole height. The only difference is that on the six lower floors of offices the columns are inside the office space whereas on the upper floors the columns come outside the panel infilling. This has a very pleasant elevational effect. The caretaker's flat is on the roof of this block, with a magnificent view over Copenhagen. There is a four-storeyed connecting block between the two wings, giving a pleasant massing to the whole building.

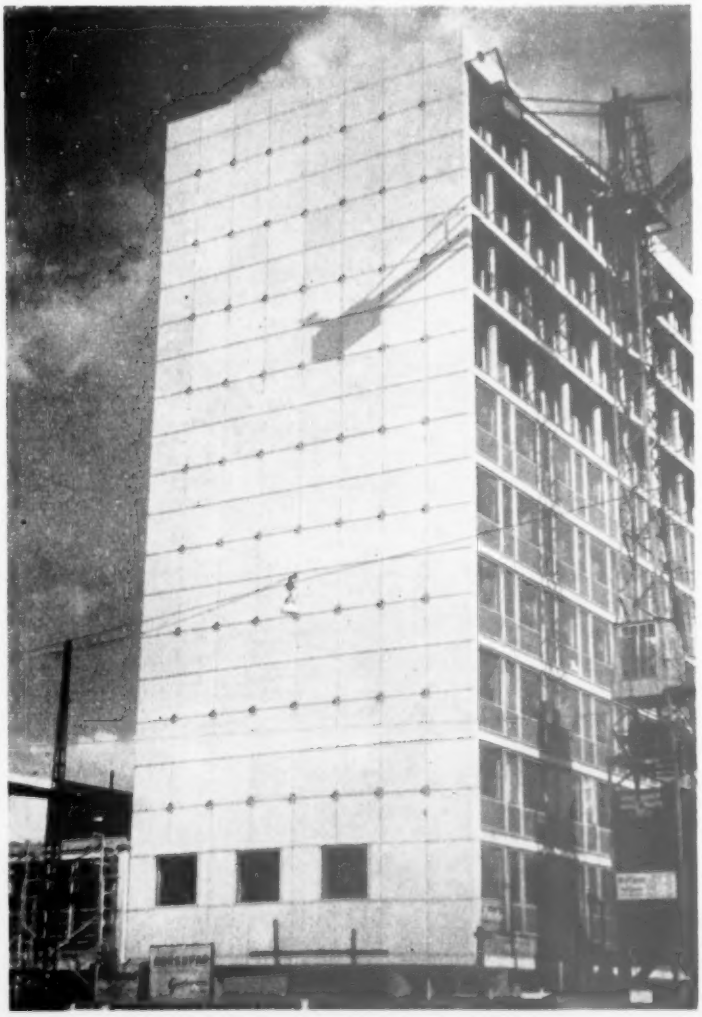
The building is a straightforward R.C. frame. The panel infilling consists of a large area of glass, double glazed according to standard Scandinavian practice. The solid areas are a foam concrete insulating block finished externally with a metal plate with enamel finish. The enamel is a magnificent green colour, blending with the green copper roofs and spires which are so much in evidence in Copenhagen, and gives a fine contrast to the white concrete.

The solid walls are faced with pre-cast concrete blocks. The pattern on the tall wall facing Vesterbrogade has a most



Above: Caretaker's flat on roof

Below: Wall facing Vesterbrogade showing fixing for neon signs



Panopticon Office Building

intriguing pattern. The blocks have been precast so that at the point of junction of four blocks there is a rectangular sinking. In each of these sinkings is fixed a triangular galvanized metal plate held away from the wall by a short length of galvanized tube. These are fixings for neon signs. Being right in the centre of the city this blank wall has tremendous advertising value. At present the building looks most attractive and one hopes that great care will be taken with the signs so as not to ruin it.

It can be seen from the site plan that the building is only separated from the railway lines by a narrow footpath and a considerable drop. In order to economize on building costs a tower crane has been used which stretches over the footpath and off-loads direct from the railway trucks on to the site.

LIBRARY NOTES

Acoustics (in Modern Building Practice)

by Fritz Ingerslev, 8¼in by 5¼in, 290 pp., fully illustrated. Published by the Architectural Press, London, 1952. Price 35s.

A NUMBER of new technical and semi-technical books on various aspects of building and buildings have been published in the last two or three years. Those from the Architectural Press are of a high standard and clearly written in a popular way suitable for digestion by the student without much effort. This recent publication on acoustics (translated by the author from his own Danish "Lille Akustik") is much more an authoritative text-book and demands considerably greater co-operation from the reader than some previous ones on this and other subjects.

It is tersely written in a no-nonsense style, the author, one of the leading European acoustic scientists, is a Master of Science at the Royal Technological University of Denmark and eminently qualified in the theory and practice of the subject, to which the acoustics of many Danish buildings are testimony. No words are wasted on preliminary discussion and the first chapter deals immediately with the properties of sound in short definitions and with a minimum of brief explanations. The treatment then naturally falls into two sections, one dealing with room acoustics and the other with noise, noise abatement and transmission. Each of the seven chapters is divided into sub-chapters with clear reference headings and numbering to which the illustrations are carefully related. These consist of a considerable number of photographs, drawings and tables while the text is everywhere reinforced with clear footnotes and many references to various sources.

There is a full presentation of formulæ for and examples of calculation to determine the probable acoustic conditions of various spaces as well as the more familiar geometric methods of checking. In addition there are useful comments on room shapes and rules for the ratios of principal dimensions. These will be of value to architects in the preliminary planning of a building though most will hesitate to go beyond these initial stages without the crutches of a consultant—the effect of the text is to reinforce one's opinion that such support is needed save in the simplest of problems.

Stated in the author's own words—"a proper diffusion of sound is one of the main acoustic requirements for halls and studios"—the problem appears simple, but behind this succinct text lie years of study while in the practical application considerable understanding is needed, not only at the design stage but in subsequent use—for instance, in the use of loud-speaker reinforcement of speech, often derived from "microphone play." A distortion such as that experienced at a recent R.I.B.A. General Meeting should not be tolerated and an improvement of sensitivity and standards at the consumer level is something that should parallel the development of acoustic control, towards which purpose acoustics are, after all, directed.

In the chapters on noise abatement and transmission much of the field covered in this country in recent years is gone over and little is added that has not been presented, but diffusely, elsewhere—if rumours of the results of recent surveys of noise transmission in houses built with the magic no-tie cavity party wall are correct there is here already need for some revision.

To review such a book with any critical comment on the author's acoustic standing would be presumptuous and one acknowledges his authority without demur. As a text-book it is comprehensive, compact but bald, for one feels the matter is presented rather in note form for lectures, needing the exposition and the exchange of the lecture room to further illumine the subject. Such illumination as exists, for example, in the paper by Mr. Bagenal "on Musical Taste and Concert Hall Design," read to the Royal Musical Association and reprinted in their proceedings (session 1951-52), full of erudition and observations that would be out of place in the *technically* more useful book, written lucidly and with grace. All architects who are interested in acoustic conditions, whether in the critical way of the musician or the parallel though negative way of concern for conditions of quiet, should know Mr. Ingerslev's book but complemented perhaps by reading Mr. Bagenal's essay which one would like to see reprinted as an additional chapter or pendant to the work under review.

TREVOR DANNATT.

Oxford Observed

By Thomas Sharp, Country Life, 12s. 6d.

AN idea of Dr. Sharp's, expounded before but here attractively represented, is that the architectural quality of Oxford (as of other towns) can be appreciated, not only statically by the study of individual buildings, but with equal revelation by perambulating slowly so that elements in the scene are disclosed one by one in a series of forms and groupings. So colleges, churches, shops, trees and monumental buildings are all seen as making their contribution to a series of visual experiences that Oxford is supremely able to give. Maelstroms of bulky traffic being an impediment to such leisured, perceptive excursions they are best made, as those who know their High will realize, at such comparatively placid times as Sunday mornings; Dr. Sharp has no doubt yearned for the days when a task laid upon college porters was the scuffling of the grass from between the *street* cobbles of their particular domains.

Dr. Sharp's chosen method of study by progression gives us what he calls the kinetic, or "moving" view of townscape. A better word would be "kinematographic," and the analogy, as Dr. Sharp frequently admits, is really with the cinema. The study of Oxford which his text and excellent photographs are able to inspire would be best made, if not in person and in Oxford, by seeing a documentary film made in a car driving along with Dr. Sharp as commentator. It is from such an approach that one can appreciate, in this author's stimulating company, such a street as the High, with its all-important curve leading the eye on from one element to another in a successfully informal variegation wholly different from the systematized, uniformly designed grandeur of a processional way or crescent in the classical tradition of, say, Bath or Edinburgh New Town; it is important for the surprise element in a mediæval city like Oxford that so many of its streets are gently curved. Much of what Dr. Sharp says is also true of Cambridge, and in both cities one has what he describes, when dealing with the street scene, as "juxtaposed" rather than "composed" harmonies, with such humble buildings as pubs and small shops lying cheek by jowl with monumental or collegiate façades. One gets the same irregularity and paradox in many individual colleges, but here Dr. Sharp is less satisfying than with the more important streets, for only The House, Corpus, and Merton are given detailed attention.

Dr. Sharp has deliberately excluded the history of Oxford and of its architecture from his scope, but I feel that he should, as both a town planner and a student of townscape, have given some explanation of the unco-ordinated informality he so rightly senses in the Oxford scene. Both of our old Universities grew as they did at a time when Colleges, separate, often hostile, never with any idea of mutual co-operation in building activity, were all-important and when the University as such was architecturally unimportant and certainly quite without the power to enforce planning and design upon its component parts. Even Gibbs' Radcliffe at Oxford was the building of a private benefaction, and the same architect's scheme for some degree of sys-

tematic planning for the "University" centre of Cambridge never got beyond one side of an intended three-sided court. Nowadays, in the provincial Universities, and with the new scientific buildings built at Cambridge by the University as such, the picture looks like being very different.

The photographs in this work are not only excellent in themselves, but helpfully illustrative of Dr. Sharp's thesis. This book would, however, have benefited greatly by the inclusion of a map.

BRYAN LITTLE.

School Buildings, 1945-1951

By Bruce Martin. Crosby Lockwood & Sons, Ltd.

THIS little book describes by means of photographs and drawings some dozen schools built in Britain and some ten built abroad. Each school is illustrated by four photographs, a block plan, a floor plan and a description of the materials and methods of construction. Such details as date, client and location are systematically tabulated.

The photographs suffer from an attempt to avoid the disadvantages of a full gloss on art paper and are, as a result, rather insipid. The majority of the subjects will, however, be familiar to architects and students for whom the book is most suited. They are certainly adequate to call back to mind buildings which have become familiar during the last few years. If further details are required a Bibliography is provided.

The author has apparently set out to give examples of what can perhaps best be described as post-war technique rather than to select schemes for their æsthetic merits. This does not mean that some of the schools illustrated are not of the highest quality.

As the author points out he includes two schools from overseas which were built pre-war—the Corona Avenue School, California, by Neutra, and the Bruderholz School, Switzerland, by Bauer. Comparison of these with our own post-war efforts lends weight to this sentence taken from Mr. Martin's introduction: "Well-trained craftsmen are few, good natural building materials difficult to obtain, and designers tend to lack detailed knowledge of methods that, in any case, can no longer be carried out." Some of us have a suspicion that lack of knowledge in designers results in a demand for the wrong materials and the wrong type of craftsmen or even a denial of the need of craftsmanship altogether.

Mr. Martin's Introduction and Summary show an enthusiasm for his subject which is attractive, but he reveals a love of some of the more doubtful heresies of modern times. He is an enthusiastic follower of the flexible building theory. Walls must vanish at a wish and rooms become gardens the moment rain stops or the wind ceases to blow. There is another view equally tenable which seems more suited to our climate. Buildings should be constructed to give the best trouble-free service for as long as possible and should be endowed with those elusive qualities that make them increase in beauty with age and grow more lovable to the successive generations that use them. "We shape our buildings and our buildings shape us." The human being is most adaptable as regards his material needs but a spiritually barren building commits the generations of its users to a spiritual desert.

Is it a coincidence that the most charming examples in his book are from foreign countries? Is England coming to the end of a spiritually barren post-war period in school architecture due to the exacting difficulties of this post-war period? It is for architects to decide.

EDWARD PLAYNE.

2,000 Years of England

By John Gloag. Cassel, 18s.

MR. GLOAG'S latest book is described on the jacket as "the story of England told in a new way . . . shows in how many ways the past is projected into the present, and how much of English history may be read from the land itself, and its towns and cities and individual buildings." The book is well illustrated by reproductions from engravings, etchings, etc., drawn from a wide variety of sources, six pages being given to illustrations from Pugin's "Contrasts," which Mr. Gloag highlights as the predecessor of Mr. Osbert Lancaster's satirical works. But the general effect of the illustrations is to give point to the remark that "what is hit is history and what is missed is mystery."

At the end of the book a list of 212 books referred to in the text is printed, a monument to the omnivorous reading powers of the author, from which he has been able to make such generalizations as "Houses and towns, villages and people, in the Middle Ages stank; but although there was plenty of noise, it was not always unmelodious, like a mechanical by-product."

The martyrdom of the nose is replaced by the martyrdom of the ear, but how bald and condensed it sounds put as Mr. Gloag puts it, how horridly concentrated!

Indoor Plants and Gardens

By Margaret E. Jones and H. F. Clark, edited by Patience Gray and illustrated by Gordon Cullen. The Architectural Press, 18s.

THIS beautiful book contains, in a more handy form, the material that originally appeared in the "Plants Indoors" number of the Architectural Review of May, 1952.

The vogue for indoor plants has gathered momentum during the last year and shows no sign of falling away. To be without indoor greenery—a green thought on a Klint shade—marks one as a dowdy, and an opportunity offers itself of acquiring Know-how by using one of your Christmas book tokens on "Indoor Plants and Gardens."

BOOKS RECEIVED

The Influence of the Cinema and Contemporary Auditoria Design, by Clifford Worthington. Published by Sir Isaac Pitman. Price 25s.

Examples of the Design of the Reinforced Concrete Buildings, by Chas. E. Reynolds. Published by Concrete Publications Ltd. Price 10s.

Structure Steelwork for Buildings, by H. P. Smith. Published by Crosby Lockwood. Price 7s. 6d.

Economical Domestic Heating, by H. G. Goddard, M.A., F.R.I.B.A. Published by E. & F. N. Spon, Ltd. Price 21s.

Density of Residential Areas. Published by Her Majesty Stationery Office. Price 5s.

Modern Town & Country Planning, by James W. R. Adams, O.B.E., P.P.T.P.I., F.R.G.S., F.I.L.A. Published by J. & A. Churchill, Ltd. Price 42s. net.

Technical Freehand Drawing, by F. C. Horstmann. Published by Sir Isaac Pitman. Price 7s. 6d.

Salisbury Cathedral, by Herbert Felton. Published by Jarrold & Sons, Ltd Price 2s 6d.

Canterbury Cathedral, by Herbert Felton. Published by Jarrold & Sons, Ltd. Price 2s 6d.

Winchester Cathedral, by Herbert Felton. Published by Jarrold & Sons, Ltd. Price 2s 6d.

Wells Cathedral, by Herbert Felton. Published by Jarrold & Sons, Ltd. Price 2s. 6d.

Building Materials and Components for Housing. Published by British Standard Institute. Price 12s. 6d.

Heat-Cooking, Heating and Hot Water in Low-Cost Houses. Recommendations by Allied Ironfounders, Ltd.

Industry in Towns, by Gordon Logie. Published by George Allen & Unwin, Ltd. Price £3.

Model Making as a Career, by F. W. Hendrick. Published by Percival Marshal & Co., Ltd. Price 5s.

The Heart of the City. Published by P. L. Humphries & Co., Ltd. £2 10s.

Dictionary of Architecture, by H. H. Saylor. Published by Chapman & Hall. Price 36s.

The Smaller English House, by Reginald Turnor, 1500 to 1939. Published by B. T. Batsford, Ltd. 42s.

Goths and Vandals, by Martin S. Briggs. Published by Constable & Co., Ltd. Price 30s.

Building Construction Illustrated, by Denzil Nield, A.R.I.B.A. Published by E. & F. N. Spon, Ltd. Price 21s.

Plumbing, by John H. Innes. Published by English University Press. Price 6s.

Register of Surveyors, Land Agents, Auctioneers and Estate Agents, 1952. Published by Thomas Skinner & Co. (Publishers), Ltd.

London County Council Survey of London, Vol. XXIV, Kings Cross Neighbourhood. Published by L.C.C. Price 35s.

2,000 Years of England, by John Gloag. Published by Cassel & Co. Price 18s.

Architectural Principles in the Age of Humanism, by Rudolf Wittkower. Published by Alex Tiranti. Price 25s.

Design and Decoration in the Home by Noel Carrington. Published by B. T. Batsford. Price 30s.

Without the City Wall, by Hector Bolitho and Derek Peel. Published by John Murray. Price 21s.

Picture Book of Russia, compiled by Lady Kelly. Published by Country Life, Ltd. Price 16s.

Oxford Observed, by Thomas Sharp. Published by Country Life, Ltd. 12s. 6d.

Civil Engineering Plant and Methods, by Rolt Hammond, A.C.G.I., A.M.I.C.E. Published by Ernest Benn, Ltd. Price 25s.

Modern Architectural Design, by H. Robertson. Published by Architectural Press. Price 25s.

Stadt-Planning Wien, by Professor Dr. Karl H. Brunner. Published by Herausgegeben vom Stadtbauamt der Stadt wien im Verlag fur Jugend und Volk G.M.B.H.

Swiss Housing Estates. Published by Les Editions D'Architecture, Erlenbach-Zurich.

Indoor Plants and Garden, by Margaret E. Jones. Published by Architectural Press. Price 18s.

Roots of Contemporary American Architecture, by L. Mumford. Published by Reinhold, Ltd. Price 56s.

Lighting in Industry. Published by British Electrical Developments Association

Granite City, by W. Dobson Chapman & Charles F. Riley. Published by B. T. Batsford. Price £2 2s.

School Building 1945-1951, by Bruce Martin. Published by Crosby Lockwood & Sons, Ltd. Price 25s.

Timber Progress and Desk Book for 1953. Published by Cleaver-Hume Press, Ltd. Price 15s.

AIR CONDITIONING IN BUILDINGS

by ROLT HAMMOND, *A.C.G.I., A.M.I.C.E.*

THE technique of air conditioning involves the simultaneous control of any or all of the physical and chemical properties of air in the atmosphere, with respect to temperature, moisture content, purity and distribution throughout a building or air-conditioned space within a building. Physical and other properties of air may vary from day to day or even from hour to hour, and certainly from month to month, so that the air-conditioning system must closely follow such changes and respond accordingly.

A true air-conditioning system must be capable of circulating and cleaning the air necessary for a building, the heating cycle moistening and heating the air and the cooling cycle cooling and drying it. Air conditioning means the production of an artificial climate so that manufacturers are no longer dependent upon, say, the atmosphere of Manchester for making cotton goods, they can turn out goods of equal quality in Calcutta or San Francisco in a factory with air-conditioning plant. Another main objective of air conditioning is to provide air at an ideal temperature and humidity wherever large numbers of people gather together for meetings or entertainment, such as in churches, cinemas and theatres.

During the initial development of air conditioning, regulation of temperature and humidity was controlled by manual means, whereas today this is done by automatic apparatus forming an integral part of every air-conditioning plant. Automatic controls have been developed to a high pitch of perfection and are very sensitive, their installation and adjustment being a matter for the specialist and of no particular concern to the architect and builder, whose main efforts will be concentrated on the arrangement of the plant in the building, the layout of the ducting and provision of suitable insulation materials.

It has been amply demonstrated that the vagaries of the weather can be completely overcome by installing air-conditioning equipment, and the efficacy of air conditioning is proved by the fact that more than 200 industries employ this scientific method of atmosphere control. Rates and limits of chemical reactions in materials can be controlled, biological and bacteriological processes can be accelerated or retarded according to the atmosphere provided, the physical conditions of both hygroscopic and non-hygroscopic substances can also be controlled, as well as the physiological reactions for human health, leading logically to the attainment of higher efficiency of production.

The architect is naturally interested in some of the applications of this technique. For example, the fermentation of a brewery must be maintained at steady conditions of temperature and humidity, and the same applies to all factories making drugs and pharmaceutical products, such as capsules, many kinds of crystals, penicillin and serum. In film laboratories air conditioning is employed in drying cabinets, studios, perforating rooms, projection assembly rooms and printing rooms; in the food industry the technique is employed in bakeries, fish processing plants, fruit product factories and especially those dealing with bananas, mushroom cultivation, the manufacture of certain types of cereals, yeast and other enzymatic products.

In the rayon industry air conditioning is used for the acetate, celanese and cuprammonium methods of manufacture, in the chemical, spinning, twisting and reeling departments, and in the winding, storage inspection and viscose sections of the works. It is also employed in the manufacture of synthetic rubber, and in the crystallizing of soap under the cold process; in the textile industry it is very useful in the regain rooms, where exact regains are required, and in the tobacco industry it is very widely used in all machine processes for cigars and cigarettes.

The architect is mainly interested in how the air-conditioning equipment will affect the design and construction of his building, and therefore we shall deal at some length with the heat transmission of building materials, because this is very important. Wherever there is a difference of temperature heat will flow towards the colder place until the temperature once more becomes uniform; where there is a great temperature difference there is also wide variation in the quantity of water vapour in the warm and cold air. In other words, the warmer the air the greater will be its capacity to take up moisture.

Heat and moisture will both try to penetrate through an insulated wall into the cold compartment of a refrigerator, or through the wall of a heated building to the relatively cold outside air. If this attempt succeeds, then moisture will enter insulation on the warm side, but it cannot get out on the cold side, so that the air will be overloaded with moisture and water will be condensed on the cold surface; if this happens, the effectiveness of the insulation is considerably impaired. When water vapour condenses on a surface at a temperature below the freezing point of water, the moisture will freeze, and in doing so will expand, and may exert enough pressure to disrupt the materials composing the insulation. The extent to which the wall of a building or a layer of insulation is able to withstand such destructive moisture conditions, and yet at the same time to retard flow of heat from the warm to the cold surface, is a measure of its efficiency.

Transmission of heat to or from the surface of a wall takes place by the combined action of radiation, convection and conduction. In the calculations concerning air conditioning and ventilating plants, use is therefore made of the coefficient U, known as the coefficient of heat transmission. This is the amount of heat, expressed in British Thermal Units, transmitted in one hour per square foot of the surface considered, for a difference in temperature of 1 degree Fahrenheit between the air on the inside and the outside of the surface. Quantity of heat transmitted by radiation will vary with the character of the surface and the difference in temperature between it and the surroundings; transmission by convection will depend upon air movement, nature of the surface, form of the surface and the temperature difference. These variables will cause wide fluctuations in surface coefficients.

Wise practical judgment must therefore be used in the selection of a suitable coefficient, and most tables giving the coefficient U are based on the following assumptions, namely: that the speed of the wind outside is 15 m.p.h.; that the inside conductance is 1.65 British Thermal Units per square foot per degree difference of temperature per hour, and that the corresponding outside conductance has a value of 6.0. In single glass windows the resistance of the surface is practically the whole resistance and is thus an important factor.

Heat will be conducted across an air space by a combination of radiation, conduction and convection. In calculating the coefficient U, an average conductance of 1.10 British Thermal Units per degree difference per hour is generally used for spaces ¾in or more in width. Most of the heat transferred across air spaces bounded by ordinary building materials is transferred by radiation. If such air spaces are faced with insulating materials like aluminium foil or coated sheet steel, radiant heat transfer will be reduced, thus causing most of the remaining radiant heat to be transmitted by convection. In order to reduce convection transfer as much as possible, the vertical air space should have a minimum width of ¾in. A conductance of 0.46 is reasonable for a ¾in air space bounded by aluminium foil.

It is essential to have a table of conductivity values so that the proper coefficient can be established, and makers of these kinds of materials publish complete tables in their catalogues. It should be emphasized, however, that conductivity values per inch of thickness do not provide a true basis of comparison between one insulating material and another. Value of such material is measured in terms of its heat resistance, the latter depending not only upon thermal conductivity per inch of thickness but also upon the thickness installed and the manner of installation. For example, in some cases two air spaces may be provided. Each air space should be 1in thick and provided with a seal at top and bottom to prevent circulation of air from one space to another.

An important point from the constructional aspect is that increase in conductivity with increase of moisture is about the same as may be reasonably expected with an increase in density. Tables of conductivity generally refer to materials in a dry state, and unless we can be certain that the materials will remain dry after installation then we must make allowance for depreciation caused by moisture content. The factors of price and availability are all important in the selection of suitable insulation, but other factors are also important, namely: conductivity per unit volume and per unit weight; heat storage capacity in terms of weight per unit volume; permanent and temporary moisture content; and fire hazard. Temperature at which insulation is to perform may be influenced by other reasons. For instance, aluminium foil, asbestos and glass fibre will successfully withstand temperatures of several hundred degrees, but some of the vegetable fibre and hair felt insulators become smelly at temperatures above 125 degrees Fahrenheit. This is an important consideration where buildings are concerned.

The conductivity per unit volume of an insulator is a very important factor where space occupied is valuable, but it is interesting to note that an entirely satisfactory commercial method of applying insulation has not yet been discovered. For example, in one case quoted by Herkimer, the specification for a submarine cable drying plant laid down that the humidity of the air should "not exceed one half of one per cent at 80 degrees Fahrenheit." It was found to be impossible to meet this rigid specification even though use was made of a waterproofing membrane considered to be commercially perfect, which was installed over and between layers of cork insulation. Satisfactory results were at length achieved by completely lining floor, walls and ceiling with 18-gauge galvanized iron sheeting with welded joints, thereby creating a hermetically sealed space. In general cold-storage work such a method would be extremely expensive and therefore out of the question.

When considering the heating aspect of air conditioning, we must bear in mind that heating for comfort means that heat must be supplied at such a rate as to control the rate of heat loss from the human body so that there is a feeling of comfort. Where heating is by convection, then heat will be transferred from a conventional heating unit —like a steam or hot water radiator—to the surrounding air and from that to the occupant of the room. The main objective of radiant heating, on the other hand, is to warm the occupant directly without heating the air to any extent, so that the difference between convection heating and radiant heating is partly physical and partly physiological.

For example, many people have felt comfortable standing in the sunshine on a cold calm day, but when a cloud passes over the sun an immediate chilly feeling will be experienced. A thermometer will not reveal any difference of temperature, and this example is quoted to show the extraordinary sensitivity of the human body to minute changes of temperature, in which no doubt imagination plays some part. A radiator transmits heat mainly by convection, and the function of any heating system is not to supply heat to the occupants of a room but rather to maintain thermal equilibrium between production of heat and loss of heat from the human body. The latter maintains its heat at a normal temperature of 98.6 degrees Fahrenheit, being so regulated that the loss about balances the rate at which heat is produced, but of course the degree of activity and the state of health of the body are important factors which complicate the problem of regulation.

It is found by experience that a skin temperature of between 90 and 94 degrees Fahrenheit will give a feeling of comfort. Heat is transferred from the moist human body by convection, radiation and evaporation from the surface of the body and the respiratory tract. Rate of heat loss by convection will depend upon the average temperature difference between the surrounding air, the surface area and size of the body, and the rate at which the air moves over it. Rate of heat loss by radiation will depend upon the exposed surface area of the body, and also upon the difference between the mean surface temperature of the body and the mean surface temperature of the surrounding walls or other objects nearby, and this latter temperature is known as the mean radiant temperature.

Total area of skin of an average human body may be assumed as 19.5 square feet for convection and 15.5 square feet for radiation. Loss by evaporation will depend upon the temperature and area of the moist surfaces of the body, the air temperature, the rate at which the air is moving and the humidity. In air at a temperature of 70 degrees Fahrenheit, this loss for a person at rest will be about 90 British Thermal Units per hour; loss by radiation and convection is from 300 to 310 British Thermal Units per hour. Experience has proved that for maximum comfort the rate appears to be about 190 British Thermal Units by radiation and about 120 British Thermal Units by convection per hour. If the effect of clothing is taken into account, mean surface temperature of the human body can be accepted as 80 degrees Fahrenheit for design purposes.

Radiant heat may be used in a building by several methods. The interior wall and the surface of the ceiling may be warmed; warm air may be circulated through shallow ducts under the floor, or the same effect may be obtained by placing steam or hot-water pipes beneath the floor. Another method is to place metal plates or panels over the interior surface of the building. Such plates or panels may be heated electrically, and it is even possible to use electrically heated tapestry mounted on screens on the wall.

It is essential to realize that radiant heating is quite different from convection heating; calculations for the latter concern heat loss from the structure of the building, whereas the former involves regulation of heat loss from the human body. The mean interior surface temperatures will depend upon

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WHO WILL DESIGN THE

CORONATION KITCHEN?

FASCINATING "DAILY MAIL IDEAL HOME EXHIBITION" COMPETITION IS OPEN TO ALL

AT DE LA RUE'S Stand at the Ideal Home Exhibition this year there will be a full size kitchen for a small house suitable for an average Housing Estate. A design for this kitchen is invited by a competition open to residents in Great Britain and Northern Ireland.

THE GENERAL REQUIREMENTS

1 A design is required for a completed kitchen suitable for a three-bedroom house. The area of the kitchen must be between 85 square feet and 110 square feet and it should have two doors, on opposite sides of the room, and one window sufficient to light the room adequately. The placing of the window is left to the competitor's choice.

2 The kitchen should be economical in first cost but should be designed for hard wear and easy maintenance and is to include a kitchen cabinet and a utility table featuring Formica Laminated Plastic veneer tops.

These units are normally 36" high to working top level and from 18" to 21" deep. The cabinet unit may be designed to have an over-top cupboard if desired. While being designed for the exhibition kitchen it is desirable that these units should be suitable for production as standard fitments for use in a variety of kitchen plans of this type.

3 In addition to the above units the kitchen must include a sink and draining board and a De La Rue G.4 Cooker which is cream and measures 21½" deep x 19" wide x 36" high (55" to top of splash plate).

4 The electric lighting is to be shown in the design.

5 It can be assumed that hot water to the sink should be supplied from a back boiler to a fire or stove in an adjoining living room.

6 All other kitchen arrangements are left to the competitors.

COMPETITION CONDITIONS

1 The CLOSING DATE is the 10th February, 1953, and all entries must be delivered not later than 5 p.m. on that day addressed to Miss Pamela Gray, Thomas De La Rue & Co. Ltd., Imperial House, 84-86 Regent Street, London, W.1.

2 Thomas De La Rue & Company will take reasonable care of entries and will return unsuccessful entries if stamps are enclosed. But they accept no responsibility for entries lost in the post, mislaid, or wrongly addressed. A set of FORMICA linette patterns will be sent on application.

3 Designs should be submitted as ½" scale or larger general plans elevations and essential sections, with sufficient full size working details to show construction and materials. A perspective sketch is optional and may be in line or colour wash. Drawings may be of any convenient size and of not more than three sheets in all. All drawings must be signed with a nom-de-plume and must be accompanied by a sealed envelope bearing the same nom-de-plume on the outside and containing a signed declaration by the competitor to the effect that the designs submitted are his own work.

4 Competitors may submit more than one entry if they wish but each entry must be packed and submitted separately.

5 The submission of an entry automatically implies permission to photograph and reproduce design and plans, the competitor's name being acknowledged in such cases.

6 The Jury will consist of the following persons or, in the event of one or more of the judges being unable to act, be of such other persons as the promoting company may appoint:

CECIL C. HANDISYDE, A.R.I.B.A.; A.A. DIP.

HERBERT NORMAN (*Director; Hill, Norman and Beard Ltd.*)

JANE ALISON (*Daily Mail Feature Writer*)

7 The decisions of the Judges will be final and binding on competitors.

8 Prizes will be paid on or before 28th March, 1953 by cheque:

PRIZES:

1ST PRIZE	£150
2ND PRIZE	£75
3RD PRIZE	£50

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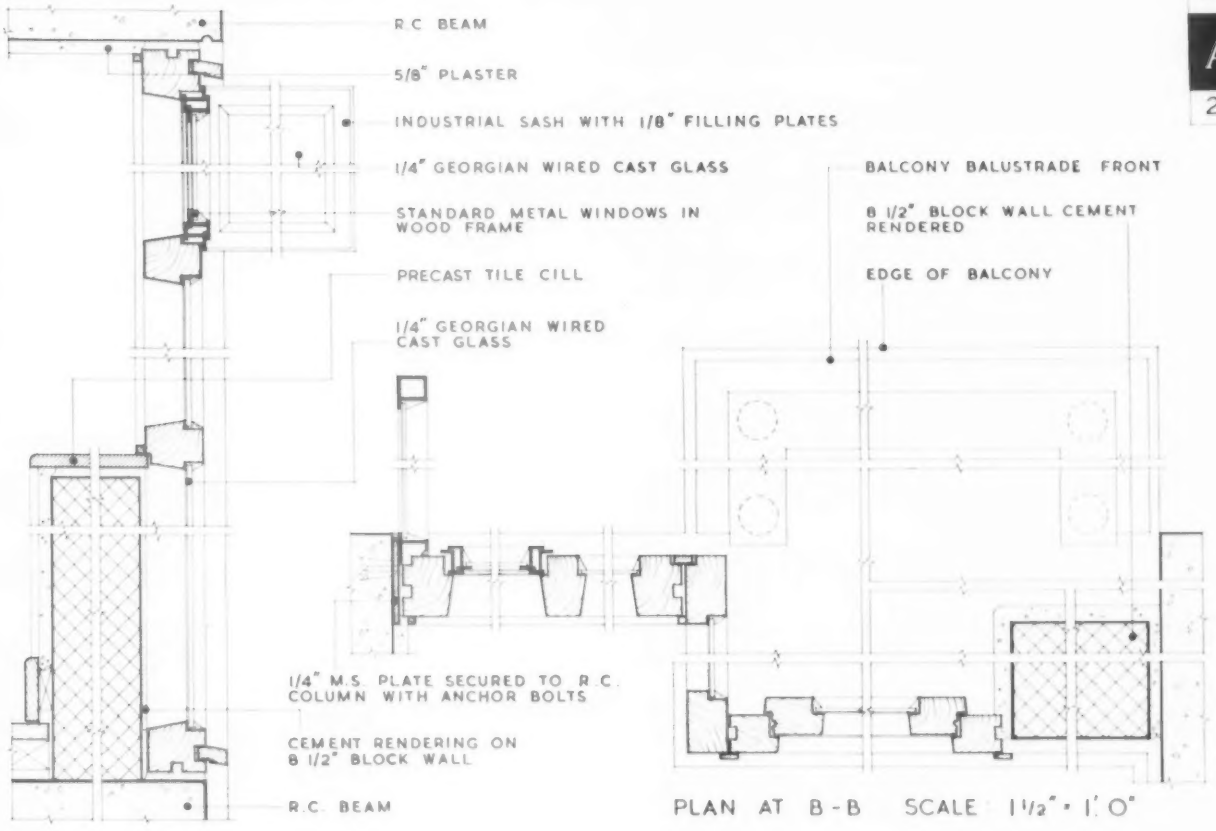
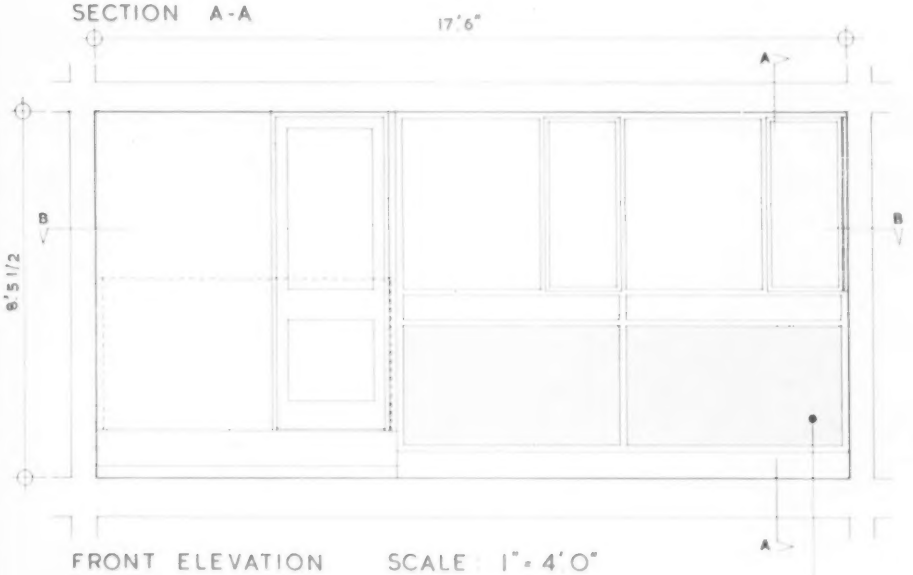
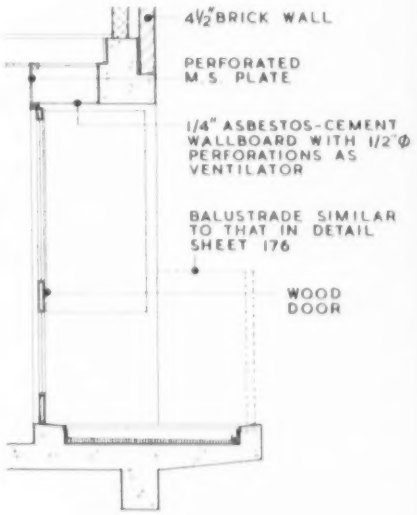


SECTION A-A

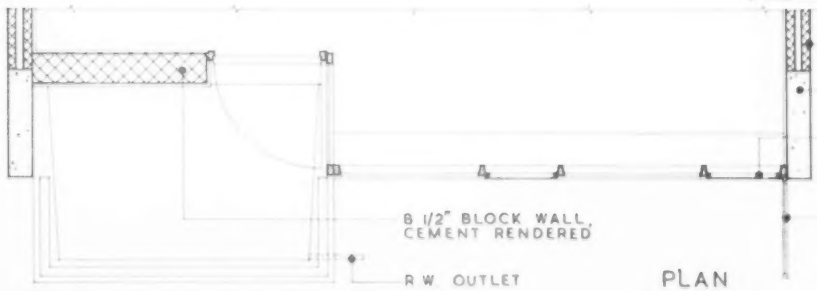
PLAN AT B-B SCALE 1 1/2" = 1'0"



FRONT ELEVATION SCALE 1" = 4'0"



SECTION THROUGH BALCONY

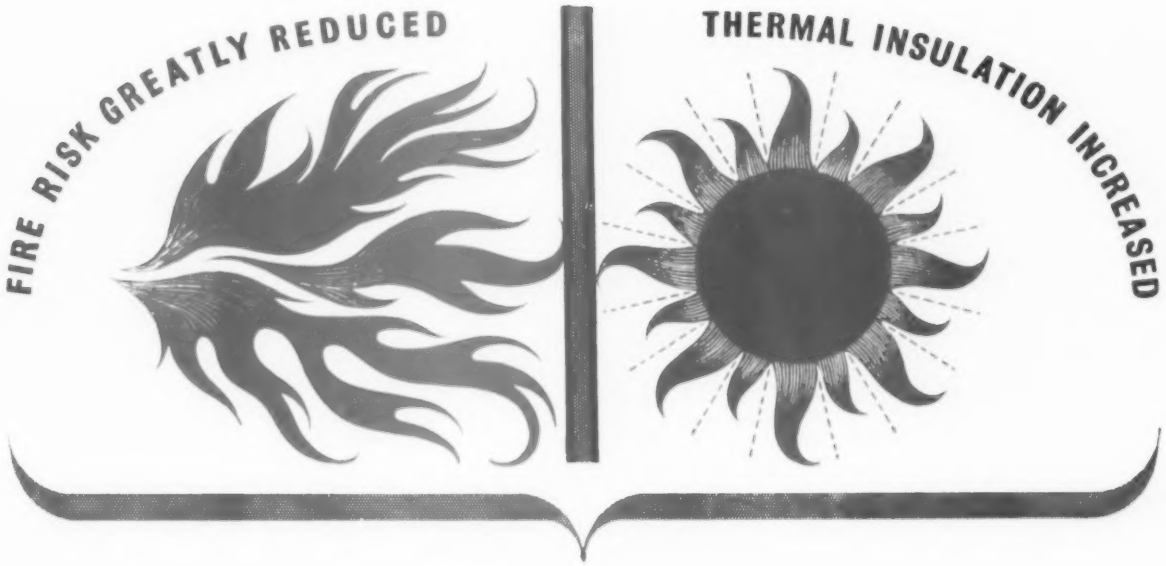


PLAN

WINDOW AND BALCONY, BLOCK 7, PIMLICO HOUSING SCHEME • POWELL & MOYA

WINDOW AND BALCONY, PIMLICO HOUSING SCHEME

ARCHITECTS: POWELL AND MOYA



WITH

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"Paramount" Plaster Wallboard is made from Gypsum —the fire-resisting mineral. Gypsum cannot burn and, if fire attacks the board, its core can only be broken down by Calcination, which involves subjection to very high temperature over a long period; thus supporting structures are protected and fire-spread delayed. "Paramount" Plaster Wallboard has long been accepted as an ideal material for internal linings; it is easily fixed and provides a perfect base for high quality decoration.

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Consists of "Paramount" Plaster Wallboard to one surface of which a veneer of bright aluminium foil has been applied. The bright aluminium foil, by reason of its low emmisivity, increases the heat insulation value of the plaster board to a degree greater than that provided by most other Insulating Boards of equal thickness.

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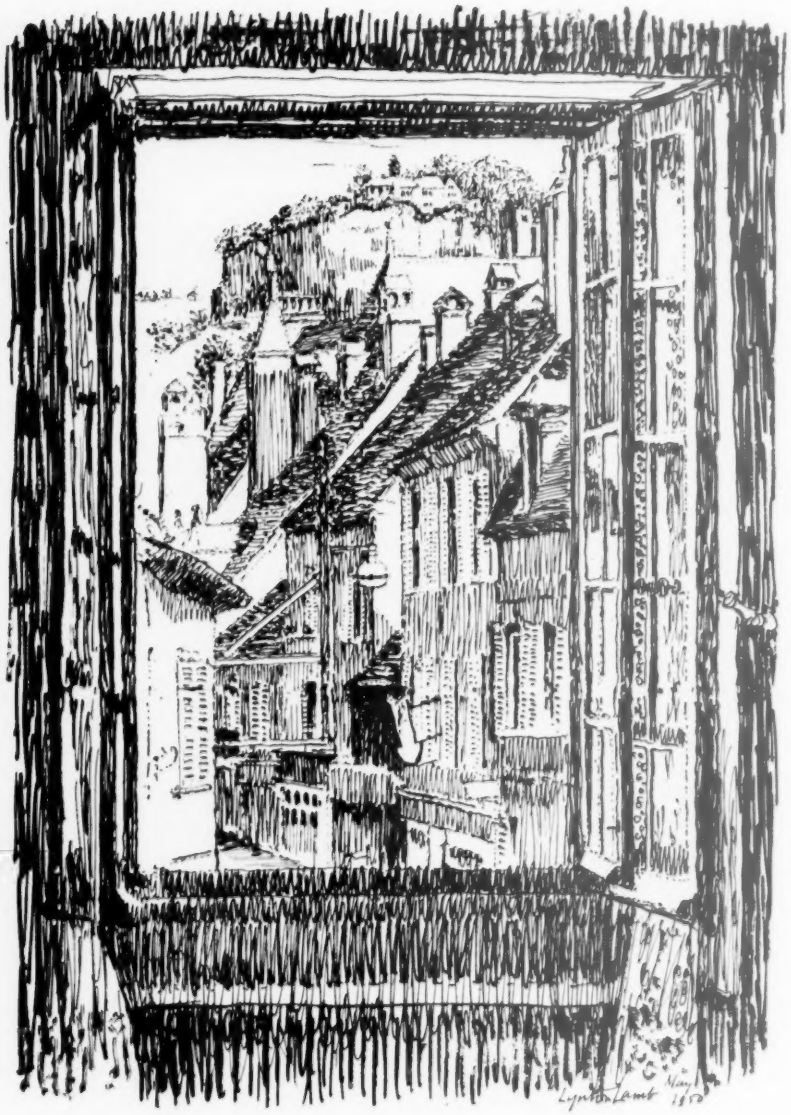
WALLASEY, CHESHIRE
Telephone: Birkenhead 4411

244/17



Ornans from the Hôtel du Jura

BY LYNTON LAMB

Lynton Lamb's drawing was done from a window of the Hôtel du Jura at Ornans. It evokes memories of a drowsy afternoon in this little French town, when apart from an occasional strident note from the klaxon of the inevitable 'Quatre Chevaux' or the bark of a dog, all was quiet as the town slept off the effects of the wines of the Moselle and the Jura.

CRITTALL WINDOWS

THE CRITTALL MANUFACTURING COMPANY LIMITED

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the type of building. For example, schools, houses and public buildings are generally designed for an interior winter air temperature of from 65 to 70 degrees Fahrenheit dry-bulb; factories and foundries are designed for a corresponding temperature range of from 55 to 60 degrees Fahrenheit.

The architect will be closely interested in efficient ventilation, and practical experience has proved that natural ventilation can be employed when the following approximate needs are fulfilled. Openings in windows and skylights are equal to 5 per cent of the floor area; that there are at least 50 square feet of floor area for each person in the building; and that there are at least 500 cubic feet of air space for each person. It is considered that in all other cases a positive supply of air should be provided, and also that air supply for laboratories and lavatory accommodation should be quite separate from any other supply or exhaust system, and that the latter should remove at least 2 cubic feet of air per minute for each square foot of floor area. Air supply or exhaust for kitchens should be separate, and allowance should be made for one change of air every minute.

Much care should be taken that air is introduced into a building at suitable velocities and at the correct height above the floor; it is found that most people feel comfortable in air which moves at from 15 to 25 feet per minute, but allowance must be made where the occupants are in action, as in a dance hall or similar place. It should be noted that draughts are more evident where the moving air is below the temperature of the room than when it is above it. The lower the temperature of the air, the smaller will be the quantity required and therefore the better must be the mixing with the air in the room before it reaches the occupants. In order to avoid accumulations of smells and tobacco smoke, at least 75 per cent of the air may be circulated and reconditioned.

Total quantity of air required is related to many factors, which include heat and moisture given off by the occupants, the heating effect of lights and electrical equipment, heat from the sun, the number of air changes required, and many other local requirements, but the main point to bear in mind is that this quantity must always be maintained constant, regardless of the number of occupants, but the ratio of fresh air to recirculated air will vary according to the number of people present.

Another matter which closely concerns the architect is efficient insulation against sound for an air conditioning system, noise being caused either by the air entering the building, or by the air-conditioning machinery, or by a combination of both. Air noise will result from the air entering at too high a velocity and is similar to that produced by an ordinary wind. Machine noise may originate from moving parts of the fan, the motor or the belt drive and may be due to many different causes such as unbalanced fan wheels, defective bearings, or noisy driving motors. To-day it is quite simple to ensure that mechanical vibrations will not be transmitted to a building by mounting the machinery on suitable pads, for which rubber and/or cork are very efficient materials. Ducting should be provided with easy bends, and the velocity of the incoming air should range from 400 to 1,000 feet per minute, yet it is still possible for a current of air to set up vibrations in the sheet metal. This can be prevented by suitable insulation.

Compressors and circulating pumps of refrigerating machinery in an air conditioning plant will require sound insulation, and as a very approximate guide it is recommended that the foundation for a compressor should be at least three times the weight of the compressor. Considerable expense and difficult work may be involved in eliminating noise from an existing system, and here it will be necessary to insert acoustical material in the duct outlets and probably near the fan. In this kind of work it is always wise to consult a specialist, because he will probably be able to arrive at the basic cause of the trouble in a very short time as a result of his own experience in dealing with similar problems.

If the fan operates at too high a speed, noise correction may be very difficult and any reduction of speed will lower the volume of air delivered. If this volume is still above the minimum required by the system, then such reduction in speed could be made, but otherwise there will be no alternative to the installation of a large fan running at reduced speed yet supplying same volume of air. If the air supply is still inadequate, then it may be necessary to install a more powerful motor, which may produce more noise, and we are back where we started! Broadly speaking, any mechanical installation should be thoroughly tested for vibration and noise before it is installed, and great care should be taken with the foundation, which should be designed and installed by an expert.

The success or failure of any air-conditioning system will largely depend upon the efficient distribution of the air, and we have to remind ourselves that this air is a cooling, heating, drying, moistening or ventilating medium in the air-conditioned space. This stream of air has a definite velocity, and it varies in temperature between certain limits, it has a certain moisture content and any considerable variations from standards which have been determined by practice may result in discomfort either due to draughts or to a feeling of stuffiness.

In any system of ducting in a building, air flow should be adjusted so that the required quantity of air will be delivered from every outlet, and it is possible to carry out this work within about 5 per cent of the correct result. Readings of air velocity are first taken at the outlets with all the dampers open, and these will indicate where too much air is being delivered, after which the dampers will be partly closed and a second set of readings will be taken; these will probably show that some of the outlets which were almost correct in the first instance may now be delivering too much air. A third adjustment will probably result in correct delivery of air at all the outlets. In selecting fans for an air conditioning system great care should be taken to ensure that they will have adequate capacity, require minimum driving power, and be practically noiseless in operation.

Here again experience indicates that the weight of the foundation for a fan should be at least three times the weight of the fan, fan and motor being preferably mounted on a single foundation with rubber or cork insulation; the motor should be provided with slide rails so that the tension of the driving belt may be adjusted after it has stretched. An important detail of design in the prevention of noise is the use of canvas connections which should be about six inches long, bolted at each end to strips of galvanized steel attached to the outlet of the fan and to the end of the ducting respectively. This simple arrangement helps largely to prevent transmission of noise through the ducting.

In an air-conditioning system there are two kinds of apparatus used for cooling the air; one is an air washer, and the other consists of tubular cooling coils. In an air washer, water at the required low temperature is sprayed into the air stream and thus cools the air; such spray will not evaporate, and if the air is cooled below the dew point, then water will be added to the sprays by condensation of the incoming air. In a pipe coil type of cooler, air is drawn across a cooling surface, and here again if it is cooled below the dew point it will deposit moisture on the coils, dripping down from the latter and being drained away from the system.

The air washer literally cleans the incoming air, but will not remove oily

soot or dust or smoke to any extent. The entrance to the air washer is provided with a perforated plate to distribute air flow over the entire area of the washer; at the exit baffle plates or eliminators are provided to prevent moisture from being carried over into the air distribution system.

An interesting development is the capillary air conditioner, for which basic patents are held by Air and Refrigeration Corporation. This is claimed to provide a combination system adapted to moistening as well as cleaning of large volumes of air for use in textile mills, chemical factories, laboratories, hospitals and other buildings. Instead of pumping large quantities of water at a comparatively high pressure through the system, intimate and efficient contact between the air and the cooling or moistening liquid is achieved at lower pressure and with lower expenditure of power. This contact is obtained by dividing both water and air into fine streams flowing through channels offering low resistance to their passage, generally consisting of cells of Fibreglass.

Drying and cooling are closely interrelated in air conditioning, and comfort is generally produced in hot weather by reduction of both temperature and humidity. Thus, if air is cooled below the dew point, the moisture content will be reduced; conversely, whenever moisture is removed there will be a rise of temperature. Drying and cooling must never be looked upon as two separate problems, but each process can be accomplished separately. When mechanical refrigeration is used for air conditioning it may be one of several types, but the most common employs direct expansion, in which a motor-driven reciprocating compressor is used to compress the gas, a condenser is used to liquefy the gas, and a cooling coil allows the gas to expand after entering the coil through an expansion valve. The most usual refrigerant employed in modern systems is Freon —known in chemical language by the somewhat formidable name of dichlorodifluoromethane—because it is comparatively harmless, although ammonia is a better refrigerating medium.

Cooling of the water jacket of the compressor and of the condenser requires water which should have a temperature below 70 degrees Fahrenheit and not greater than 80 degrees Fahrenheit. Quantity of water used will amount to about 3.5 gallons per minute for every ton of refrigeration produced. This water cannot be recirculated in the system unless the heat gained is removed by passing the water through a cooling tower, a spray pond, or some other similar device. If well water is available in adequate quantity at low temperature during the cooling season, it may be pumped directly to air washers or cooling coils.

In recent years the unit type of air conditioner has become very popular, and this is shown in Fig. 1, but some buildings are suited to this kind of apparatus, whereas others can be better served by a large central plant, in which all services are concentrated in the apparatus room. Where the unit system is employed the service must be split up into a number of different connections spread all over the building. This may be more expensive from a repair and maintenance aspect than a large central installation. It is essential to realize that any air conditioner must fulfil three basic functions, namely: heating, moistening and distributing the air in winter and cooling, drying and distributing the air in summer, all these factors requiring simultaneous control in each case.

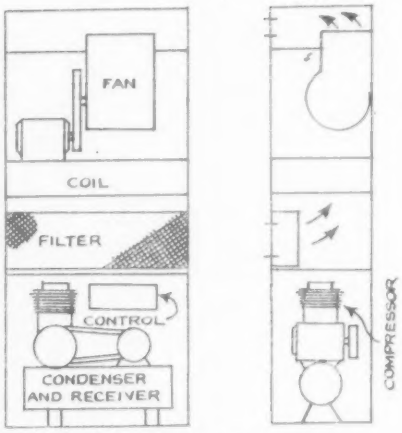


Fig. 1. Unit type of air-conditioner.

The layout of a centralized industrial air-conditioning plant is shown in Fig. 2, and this is a comparatively simple apparatus. An air conditioner for comfort will probably be much more complex, equipped with automatic damper control, drying for summer air conditioning, and fitted with cooling control and other refinements. In this installation the incoming fresh air is mixed with the recirculated air. Water sprays which are filtered and pre-heated then moisten the air, which will thus become saturated at a given temperature. The temperature of this air can then be raised to the required value before entering the conditioned space. Relative humidity is varied by altering the temperature of the air in the spray chamber, thereby controlling the saturation point. Temperature of the spray water is controlled by a thermostat.

In some manufacturing processes, and for the storage of materials which have a tendency to absorb moisture, it is necessary to dry the air. Such a drying plant can also be used in hot climates for cooling air during the hottest periods. Fresh air is mixed with re-circulated air, a fan drawing either a part or the entire volume through a drying section. Relative moisture content is maintained automatically by a proportioning damper, which will bypass the drying unit to a greater or less degree. The driving motor for the damper will be controlled by the combined action of a thermostat in the air conditioned space and a moisture control device in the duct system.

The above is merely a brief review of some of the basic facts concerning

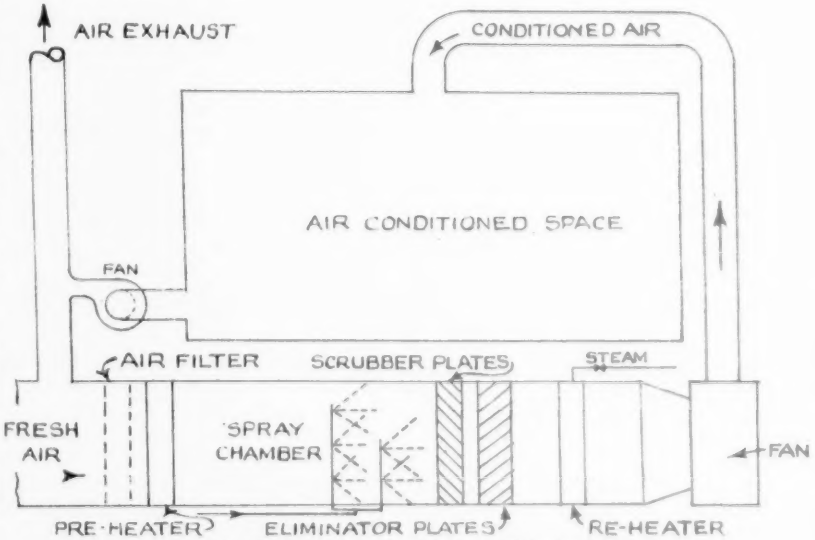


Fig. 2. Centralized industrial air-conditioning plant

air conditioning, but it must be clear to any architect or builder that air conditioning is a very specialized technique and that the design and construction of air conditioning equipment should be entrusted to specialists with wide knowledge and long experience.

Yet it may help the architect if he is aware of the great advantages of air conditioning, and it would appear that there is a very bright future for it in tropical countries as industry develops. It is a fallacy to regard low capital cost as being the most important factor when considering such installations, because it may well be that a slight increase in the first cost to provide, for example, better access to the equipment, will be completely justified because it may result in reduced charges for repair and maintenance. Moreover, a relatively slight increase in first cost may also result in improved air distribution and flow which may eventually pay for itself.

In the case of a factory, the air conditioning is determined mainly by the manufacturing requirements, and experience has proved that the average temperature in summer inside the building should be about 80 degrees Fahrenheit dry-bulb with a relative humidity of 50 per cent. Controls for an air-conditioning system may be very complex, particularly in those cases where refrigeration plant is used in combination with the conditioning apparatus. One of the most important controls is that which operates the cooling coils or the temperature of the air washer where one is used, this being the control governing the amount of moisture going into the air conditioned space.

Another very important control is the room thermostat which governs the temperature or amount of air delivered in accordance with the temperature of the room. Yet another is the thermostat in the air supply duct which prevents air at a temperature lower than 65 degrees Fahrenheit from entering the building. There are also thermostats fitted to the intakes in the outside air, which will operate the dampers so that only outside air will enter when its temperature is low enough to permit cooling without the use of refrigeration; other thermostats at these intakes will be adjusted so that they will turn on steam whenever the outside temperature reaches, say, 35 degrees Fahrenheit, and where there may be a danger of the cooling coils becoming frozen.

Where refrigeration plant is employed, the machines are generally started and stopped by a thermostat fitted on the water cooler. There are also safety devices used so that the pressure cannot rise too high in the system, and the driving motors are also provided with the usual safety arrangements. Fans are often fitted with remote controls, circulating pumps with controls such that the system cannot be started until these pumps are put into service, and sometimes being so arranged that automatic stopping of the system will also shut down all auxiliary features such as refrigeration, cooling water circulation, and so forth.

Finally, in estimating the cost of an air-conditioning system it is essential in the first place to make a detailed survey of existing conditions and of the requirements of the plant. Without careful preliminary planning, it may be necessary to modify the plant after it has been installed, and this is always an expensive and irritating business, which will more often than not result in unsatisfactory operation.

Building Exhibition at Bolton

The Minister of Works, the Rt. Hon. David Eccles, M.P., will open the Modern Building Exhibition at Bolton Technical College on January 15. The Exhibition will remain open until January 21. The official opening by Mr. Eccles will be at 3 p.m., at the Technical College, Manchester Road, Bolton. The Chairman at the ceremony will be the Mayor of Bolton, Alderman James Vickers, J.P.

The Exhibition is being organized by the Ministry of Works and supported by the Bolton Education Committee, the Ministry of Labour and National Service, Bolton Corporation, the Employers' and Operatives' associations, and the local Joint Apprenticeship Committee.

While the Exhibition is being held, the Technical College is co-operating by inviting builders and members of the public to visit its workshops, see work in progress, and examine students' handicraft.

Ministry of Works exhibits will include "Building Research and Housing," "Domestic Plumbing" and "Careers in Building." There will also be exhibits of local interest, which will include development schemes and architectural designs, models, working drawings of schools. houses, churches, technical colleges, public and industrial buildings. The Bolton Training College will show examples of teaching aids made by building teachers in training at the college.

A series of lectures will be held during the period of the Exhibition. The first lecture will be given by Sir George Gater, chairman of the Building Apprenticeship and Training Council, at 7.30 p.m. on the opening day. Films dealing with subjects of interest to builders, building students and others connected with the industry will be shown daily.

Opening hours of the Exhibition are 11 a.m. to 8.30 p.m. daily. Admission is free.

Clerk of Works Diploma Examination

The 1953 A.B.T. Clerk of Works Diploma Examination will be held in London and Glasgow on Thursday, Friday and Saturday (morning session only), April 9, 10 and 11, 1953. Other centres will be arranged according to demand.

The written examination will last for 2½ days with an oral examination during the last session, and will cover the following subjects: 1. Building Construction and Services. 2. Building Materials. 3. Quantities and Estimating. 4. Land Surveying. 5. Drainage and Sanitation. 6. Site Practice.

Candidates are not required to be members of the Association and non-members participate on the same terms as members. All applicants must have had approved experience of at least ten years as skilled building operative or supervisory technician, of which five years must have been spent on the site.

Copies of the syllabus and application forms, which must be returned by Saturday, March 28, 1953, may be obtained, free of charge, from F. E. Shrosbree, General Secretary, Association of Building Technicians, 5, Ashley Place, London, S.W.1. Papers set for the 1949, 1950, 1951 and 1952 examinations, in printed booklet form, are also available, price 2s 6d per set, post free.

* * *

The fourth British Furniture Exhibition since the war, sponsored by the British Furniture Manufacturers Federated Associations, is to be held at Earls Court, London, from February 17 to 27, 1953. Nearly 300 manufacturers of all types of furniture and furnishings will exhibit in an area of 214,000 square feet.

Almost immediately preceding the London Show there is to be a British Furniture Exhibition at the City Hall, Manchester (January 13 to 22), where manufacturers not exhibiting at Earls Court will show their products to the North of England.

The public are again to be admitted to both these exhibitions during restricted hours—as follows:—

At Earls Court, London: Friday and Saturday, February 20 & 21, from 10 a.m. to 9 p.m. Monday, February 23, to Thursday, February 26, inclusive, from 2 p.m. to 9 p.m.

At City Hall, Manchester: January 16 to 19, inclusive, from 10.30 a.m. to 9 p.m. daily.

* * *

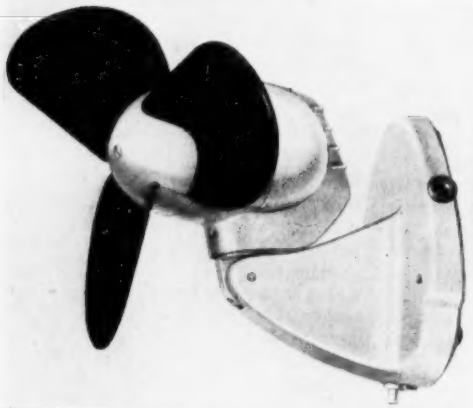
Mr. P. Arthur Wells, M.A., M.Sc., F.C.C.S., F.Inst.P., who has been Deputy Secretary and Secretary-designate since April 1, 1951, assumed the Secretaryship of the Royal Sanitary Institute on January 1, 1953.

SERVICES
LIGHTING
B 1/61.

The makers of the pendant shown here are well known for their fittings for schools, churches, offices, etc., and have now produced this entirely translucent all-glass unit.

The units are to be known as "Lumilux."

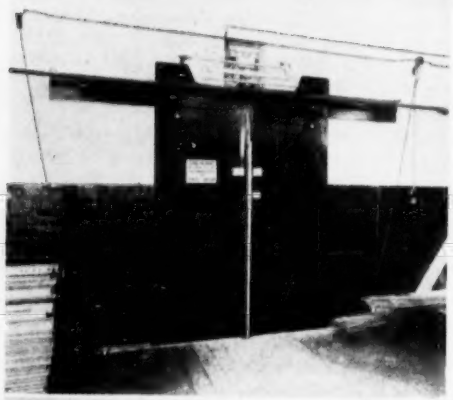
A feature is the combined glass canopy and reflector which forms one moulding. The diffusing glass cover is clipped to the reflector unit and carries a diffusing pattern of flutes and cross prisms.



SERVICES
VENTILATION
B 2/6.

The rubber bladed fan was illustrated in July 1950 in the 8 inch model. Here is a development of that model. It is the 10 inch type which may be used either as table or bracket model.

The weight is 5½ lb and the price £7 18s. plus P.T. £3 19s.



STRUCTURE
DOORS
A 11/2.

This illustration and A 11/3 shows electrically operated doors originally designed for lift entrances and now adapted to provide automatic sliding doors suitable for factories and warehouses.

The doors close automatically thus preventing draughts and assisting in maintaining constant temperatures. For further description see A 11/3.

STRUCTURE
DOORS
A 11/3.
See also A 11/2.

The doors consist of two sliding panels opening from the centre and run on ball bearing rollers on bright steel tracks. The doors are opened and closed by an electric operator which, to prevent excess torque being transmitted to them, incorporates a clutch.

A sensitive edge is fitted to the doors to ensure instant reversal should an obstruction be met. An adjustable time delay is embodied in the controller so that the doors are held open for any predetermined period within the limits allowed.

The doors are opened by means of press buttons which can be fitted at any convenient point.

MOSAICS

The names and addresses of manufacturers of any item illustrated in MOSAICS, together with more detailed information relating to their products—including price and availability—will be forwarded to readers on request.

Letters should quote the serial number and be addressed to :

The Editor,
The Architect and Building News,
Dorset House,
Stamford Street, S.E.1.

Please mark the envelope MOSAICS.

INDUSTRIAL NOTES

The Birmingham Local Joint Committee for the Building Industry has decided that the fixed week for the holiday to be taken in 1953 under the Holidays with Pay Scheme shall be the normal working week commencing Monday, June 29, and terminating Saturday, July 4, 1953, both dates inclusive.

The area covered by the Committee includes the whole of the area of the City of Birmingham and a five miles' radius from Stephenson Place (excluding any portion of the Borough of West Bromwich), the County Borough of Smethwick, the Municipal Borough of Oldbury, portions of the Municipal Borough of Rowley Regis and the whole of the Urban District of Solihull.

* * *

As from January 1, 1953, F. H. Biddle, Ltd., are operating as the Sales Division, both home and export, of the British Trane Co., Ltd. The address remains the same, 52, Clerkenwell Close, London, E.C.1, but the telephone numbers are now Cle. 8064/9.

* * *

The British Standards Institution has just issued B.S.740, Part 2 "Portable fire extinguishers of the foam type (gas pressure)."

In this type of extinguisher the extinguishing medium (foam) is expelled by means of pressure resulting from compressed or liquefied gas from a pressure container attached to, or fitted into, the extinguisher.

The standard gives full details of the requirements regarding method of operation, performance, anti-corrosion treatment and chemical charge to be used in the extinguisher, as well as specifying the riveted and welded construction of the extinguisher for all details, together with the necessary fittings.

Additional clauses are also given covering method of test and marking.

Copies of this standard may be obtained from the British Standards Institution, Sales Branch, 24, Victoria Street, London, S.W.1. Price 6s

CONTRACT • NEWS •

Notes below give basic data of contracts open under locality and authority which are in bold type. References indicate: (a) type of work, (b) address for application. Where no town is stated in the address it is the same as the locality given in the heading, (c) deposit, (d) last date for application, (e) last date and time for submission of tenders. Full details of contracts marked ★ are given in the advertisement section.

OPEN

BUILDING

BASINGSTOKE B.C. (a) 50 dwellings, South Ham site. (b) Borough Surveyor, Municipal Buildings. (c) 2gns.

* * *

BEWDLEY B.C. (a) 28 houses and 8 bungalows, Springhill Estate. (b) S. J. Rowe, Municipal Offices, 4, Load Street. (c) 3gns. (e) Jan. 19.

* * *

BILLERICAY U.C. (a) 1 block of 9 garages, Vange Estate, and 1 block of 15 garages, Wickford Estate. (b) Council's Surveyor, Council Offices, High Street. (c) 2gns. (d) Jan. 10.

* * *

BILLERICAY U.C. (a) (Contract No. 28) 8 houses and (Contract No. 29) 16 houses at Seven Acres and Barnfield Wickford Estate. (b) Council's Surveyor, Council Offices, High Street. (c) 2gns. (d) Jan. 12.

* * *

BUCKFASTLEIGH U.C. (a) 20 houses at Tweenaways. (b) Messrs. Grant and Green, High Street, Totnes. (e) Feb. 2.

* * *

CORBY U.C. (a) (1) General site works including 1,600 sq yds of roadways and 300 lin yds of 6in and 9in sewers, etc., (2) erection of administration block and lock-up garages including mass concrete foundation blocks and reinforced concrete floor slabs and (3) mass concrete foundation blocks and reinforced concrete floor slabs for two precast concrete framed buildings, for new Central Depot. (b) Council's Clerk, Council Offices. (c) 3gns. (e) Jan. 23.

* * *

CUMBERLAND C.C. (a) First instalment of college of further education at Flatt Walks, Whitehaven. (b) Council's Clerk, The Courts, Carlisle, with particulars of large contracts carried out. (d) Jan. 19.

* * *

EAST RIDING C.C. (a) Alterations and extensions to provide two classrooms at Anlaby Primary School. (b) County Architect, County Hall, Beverley. (c) £2. (e) Jan. 26.

* * *

EAST SUSSEX C.C. (a) Erection of Robertsbridge secondary school. (b) County Architect, County Hall, Lewes. (d) Jan. 13. (e) Feb. 17.

* * *

EIRE—MONAGHAN LEATHER CO., LTD. (a) Tannery at Monaghan. (b) R. Kernan, 3, York Street, Castleblayney. (c) £2. (e) Jan. 21.

* * *

ESSEX C.C. (a) Interior renovations at Woodford Bridge County Primary School (estimated cost approx. £2.750). (b) County Architect, County Hall, Chelmsford. (d) Jan. 10.

* * *

HAMPSHIRE C.C. (a) Grammar school at Totton, near Southampton. (b) County Architect, The Castle, Winchester. (c) 3gns cheque payable to County Treasurer. (d) Jan. 20.

* * *

HORSFORTH U.C. (a) Small public conveniences. (b) Engineer and Surveyor, Council Offices, Manor Road. (c) 2gns. (e) Jan. 24.

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KINGSTON-UPON-HULL C.C. (a) War damage repair and maintenance work at Francis Askew School. (b) City Architect's Department, Guildhall, Hull. (c) 1gn to City Treasurer. (e) Jan. 16.

* * *

KINGSTON-UPON-HULL C.C. (a) Alterations and additions to "Ferriby House," North Ferriby. (b) City Architect's Dept., Guildhall, Hull. (c) 1gn to City Treasurer. (e) Jan. 22.

* * *

LINCOLN C.C. (a) Prefabricated timber classroom at Long Bennington C. of E. School. (b) County Architect, County Offices, Sleaford. (d) Jan. 12. (e) Jan. 26.

* * *

LINCOLN C.C. (a) 1 pair of police houses at Exeter Gardens, Stamford. (b) County Architect, County Offices, Sleaford. (e) Jan. 26.

* * *

LINCOLN COUNTY COUNCIL E.C. (a) Infants' school at Thrunscoe, Cleethorpes. (b) County Architect, County Offices, Lincoln. (e) Jan. 22.

* * *

LIVERPOOL REGIONAL HOSPITAL BOARD. (a) Provision of new mental deficiency colony at Greaves Hall Hospital, Banks, near Southport, comprising prefabricated timber site office and workshop buildings, alterations and extensions to kitchen, alterations to workshop to form laundry. (b) T. Noel Mitchell, 88, Church Street. (c) 2gns. (e) Jan. 26.

* * *

LONDON—HENDON B.C. (a) Conversion of basement to provide dining and cooking facilities at Hendon County Grammar School. (b) Borough Engineer, Town Hall, N.W.4. (c) 2gns. (d) Jan. 10.

* * *

MAIDENHEAD B.C. (a) (Contract 3T). 7 pairs of houses, Larchfield Estate. (b) Borough Engineer, 14, Craufurd Rise. (c) £2. (e) Jan. 23.

* * *

NEW FOREST R.C. (a) 36 houses at Clayhill, Lyndhurst (Contract No. 2). (b) Engineer and Surveyor, Council Offices, Lyndhurst. (c) £2. (e) Jan. 21.

* * *

N. IRELAND—NORTHERN IRELAND HOUSING TRUST. (a) 24 flats with engineering works, etc., at Ballymena, Co. Antrim. (b) Trust Offices, 12, Hope Street, Belfast. (c) £3. (e) Jan. 27.

* * *

N. IRELAND—STORMONT PRESBYTERIAN CHURCH (BELFAST). (a) New Stormont Presbyterian Church and ancilliary buildings. (b) Messrs. Thomas T. Houston and Co., 26, College Gardens, Belfast. (c) 3gns. (e) Jan. 30.

* * *

RIPON C.C. (a) 121 houses, Lead Lane Estate. (b) Messrs. Anthony Steel and Owen, 89, Albion Street, Leeds. (c) 5gns. (e) Jan. 24.

* * *

RUSHDEN U.C. (a) 120 houses, Upper Queen Street Estate, Upper Queen Street and Lawton Road. (b) Engineer and Surveyor, Council Buildings. (e) Jan. 20.

* * *

SAFFRON WALDEN R.C. (a) 8 houses at Debden. (b) Council's Clerk, Council Offices, Debden Road. (e) Jan. 24.

* * *

SAFFRON WALDEN R.C. (a) 4 houses at Wicken Bonhunt. (b) Council's Clerk, Council Offices, Debden Road. (e) Jan. 24.

* * *

SCOTLAND—CAITHNESS C.C. (a) 72 houses on 13 sites (separate trades). (b) County Architect, County Offices, Wick. (e) Jan. 27.

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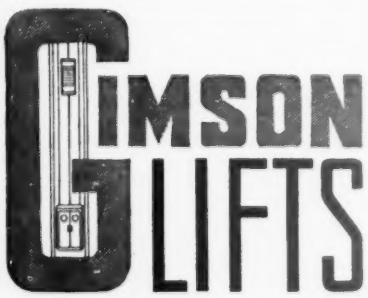
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TOTNES R.C. (a) 19 houses at Stoke Gabriel. (b) Engineer and Surveyor, Council Offices, Higher Plymouth Road. (c) 2gns. (e) Jan. 30.

* * *

TURTON U.C. (a) (Contract No. 4) 53 dwellings, Toppings Estate, Eagley. (b) Engineer and Surveyor, Council Offices, Bromley Cross, near Bolton. (c) 5gns. cheque payable to Council. (d) Jan. 17.

* * *

VAYNOR AND PENDERYN R.C. (a) (1) 30 houses at Pontsticill, near Merthyr Tydfil. (2) 8 houses with footpath, roads, and sewer at Penderyn, near Aberdare, and (3) 20 houses with footpath, roads and sewer at Pontneathvaughan, near Glyn Neath. (b) E. J. H. Hughes, Council Offices, 25, Victoria Street, Merthyr Tydfil. (c) 3gns. (e) Jan. 27.

* * *

WALTON AND WEYBRIDGE U.C. (a) 30 flats, Rydens Road, Walton-on-Thames. (b) Engineer and Surveyor, Council Offices. (e) Jan. 24.

* * *

WEST RIDING C.C. (a) (1) 2-bay fire station at Holmfirth Road, Meltham and (2) adaptations and extensions at the Fire Station, Huddersfield Road, Holmfirth. (b) County Architect, "Bishopgarth," Westfield Road, Wakefield. (c) 2gns each site. (e) Feb. 2.

* * *

WEST RIDING C.C. (a) Adaptations at Knaresborough Castle C. of E. Boys' School. (b) County Architect, "Bishopgarth," Westfield Road, Wakefield. (c) 2gns. (e) Feb. 16.

* * *

WORCESTERSHIRE C.C. (a) Dining room and kitchen block at Prince Henry's Grammar School, Evesham. (b) County Architect, 14, Castle Street, Worcester. (c) 2gns. (d) Jan. 17. (e) Feb. 19.

MISCELLANEOUS

DAGENHAM B.C. The Council is preparing a list of Contractors for works of school maintenance as follows: (a) building repairs and maintenance; (b) flat roofs and tarpaving; (c) heating; (d) electrical work. Applications to Borough Engineer, Civic Centre, Dagenham, by January 10, with particulars of similar works carried out for other local authorities.

PLACED

Notes on contracts placed state locality and authority in bold type with (1) type of work, (2) site, (3) name of contractor and address, (4) amount of tender or estimate. † denotes that work may not start pending final acceptance, or obtaining of licence, or modification of tenders, etc.

BUILDING

WOKINGHAM B.C. (1) 86 dwellings. (2) Norrey's Farm Estate. (3) Gee, Walker and Slater, Ltd., 100, Park Lane, London, W.1. (4) £107,926.

* * *

ANDOVER B.C. (1) 38 houses. (2) Harroway. (3) Sturgess Bros., Springfield, Weyhill. (4) £50,549.

* * *

ANDOVER R.D.C. (1) 47 dwellings. (2) Greensey. (3) T. King and Son (Builders), Ltd., Abbots Ann, Hants. £50,484.

* * *

BELFAST CORPORATION. (1) 47 houses, 12 flats. (2) Crumlin Road area. (3) Fortus Constructions, Ltd., Riddels Buildings, Donegal Place, Belfast. (4) £75,640.

* * *

GRANTHAM B.C. (1) 24 houses. (2) W. Foster and Son, 41, Castlegate, Grantham.

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HALTEMPRICE U.D.C. (1) 92 houses. (2) Station Road, Hessle. (3) J. Needler, 25, Westella Road, Kirkella, and R. L. Edmonds and Co., Ltd., 224, Westella Road, Kirkella.

* * *

N. IRELAND. (1) Erection of large factory for English Sewing Cotton Mills, Ltd., Manchester. (2) Lisnaskea, Co. Fermanagh. (3) Harland and Wolff, Ltd., 126, Scottish Provident Building, Belfast. (4) £400,000.

* * *

CLITHEROE B.C. (1) 135 "No Fines" houses. (3) Geo. Wimpey and Co., Ltd., 629, Eccles New Road, Salford.

* * *

STAVELEY U.D.C. (1) 40 houses. (2) Inkersall Green, Brimington. (3) Bailley and Martyn, Ltd., Bank Street, Sheffield. (4) £58,835.

* * *

WAKEFIELD E.C. (1) Infants' school. (2) Kettlethorpe. (3) Walter G. Birch (Harrogate), Ltd., 33, Springfield Avenue, Harrogate. (4) £42,424.

* * *

BRIDGWATER B.C. (1) 24 flats. (2) Sydenham Estate. (3) R. M. Smith, Ltd., Cossington, Somerset. (4) £27,600.

* * *

HEMEL HEMPSTEAD B.C. (1) 38 houses and 12 flats (Scheme 3) and 52 houses (Scheme 4), and 38 houses (Scheme 6). (2) Adeyfield and Beechfield. (3) Jesse Mead, Ltd., Chesham, Bucks.

* * *

LIVERPOOL CORPORATION. (1) 48 flats. (2) Rose Hill. (3) Direct labour. (4) £91,500.

* * *

BIRKENHEAD T.C. (1) 50 houses. (2) Woodchurch Estate. (3) Lloyd and Cross, Ltd., Argyle Street, Birkenhead. (4) £78,383.

* * *

DOVER B.C. (1) 32 flats. (2) Durham Hill. (3) S. C. Ward, Ltd., 37a, Newington Road, Ramsgate. (4) £48,195.

* * *

CHESHAM (BUCKS) U.D.C. (1) 17 flats. (2) Victoria Road. (3) E. Greenham, Ltd., Mineral Lane, Chesham. (4) £27,215.

* * *

COVENTRY CORPORATION. (1) 30 houses. (2) Bell Green. (3) Hall Bros., Walsgrave on Sowe. (4) £35,286. (1) 22 houses. (3) Coltman and Son, 57, Castle Street, Coventry. (4) £26,544.

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BROWNHILLS (STAFFS) U.D.C. (1) 37 houses. (2) Salters Road. (3) Direct labour. (4) £55,514.

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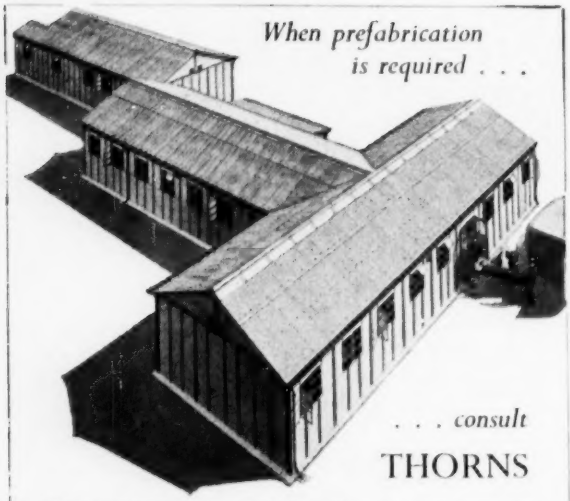

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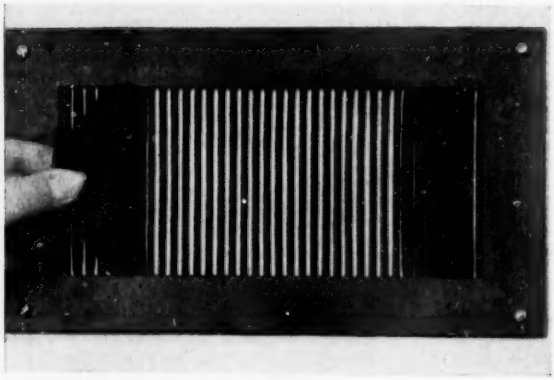

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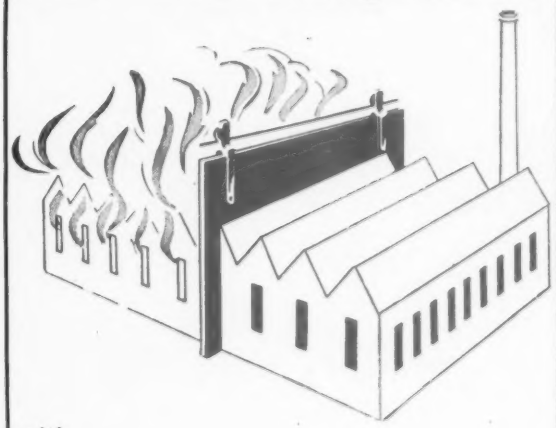

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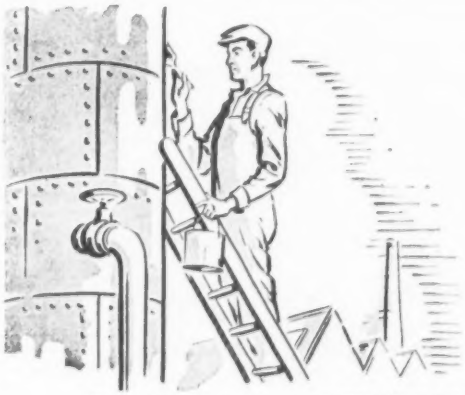

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Salary £433-£567 per annum according to qualifications and experience.

Applications, giving full details of age, qualifications and experience, should be forwarded to the Secretary, Yorkshire Electricity Board, Wetherby Road, Scarcroft, Leeds, not later than 29th January, 1953. [6859

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Intending candidates should apply in writing to the Director of Recruitment (Colonial Service), Colonial Office, Sanctuary Buildings, Great Smith Street, S.W.1, giving brief details of their age, qualifications and experience. They should mention this paper and quote the reference number (CDE 112/3/01). [6858

APPOINTMENTS—contd.

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Applicants should be Corporate members of the Royal Institute of British Architects, with good architectural and building experience.

Ability and experience in office organization and supervision of staff are essential.

The scale of salary for the position is £925 × £60—£1,105 per annum.

(2) ASSISTANT ARCHITECTS:
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Forms of application and conditions of appointment may be obtained from the Education Office, Academy Street, Belfast, on receipt of a stamped addressed foolscap envelope. Applications, in envelopes suitably endorsed, should reach the undersigned not later than WEDNESDAY, 4th February, 1953.

JOHN DUNLOP,
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City Hall, Belfast.
3rd January, 1953. [6863

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Intending candidates should apply in writing to the Director of Recruitment (Colonial Service), Colonial Office, Sanctuary Buildings, Great Smith Street, S.W.1, giving brief details of their age, qualifications and experience. They should mention this paper and quote the reference number (CDE 112/39/01). [6861

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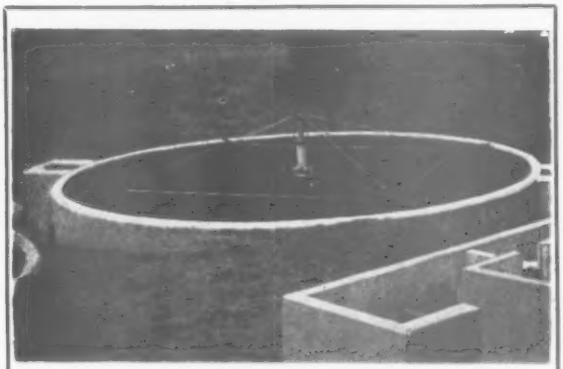

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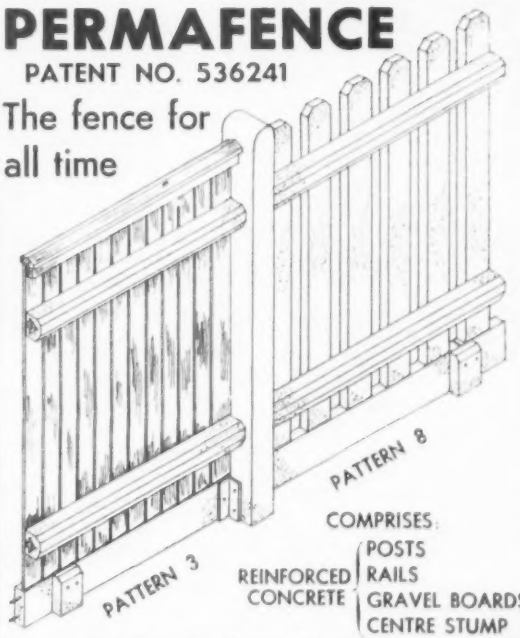

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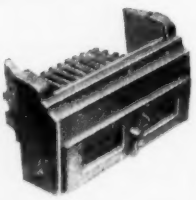

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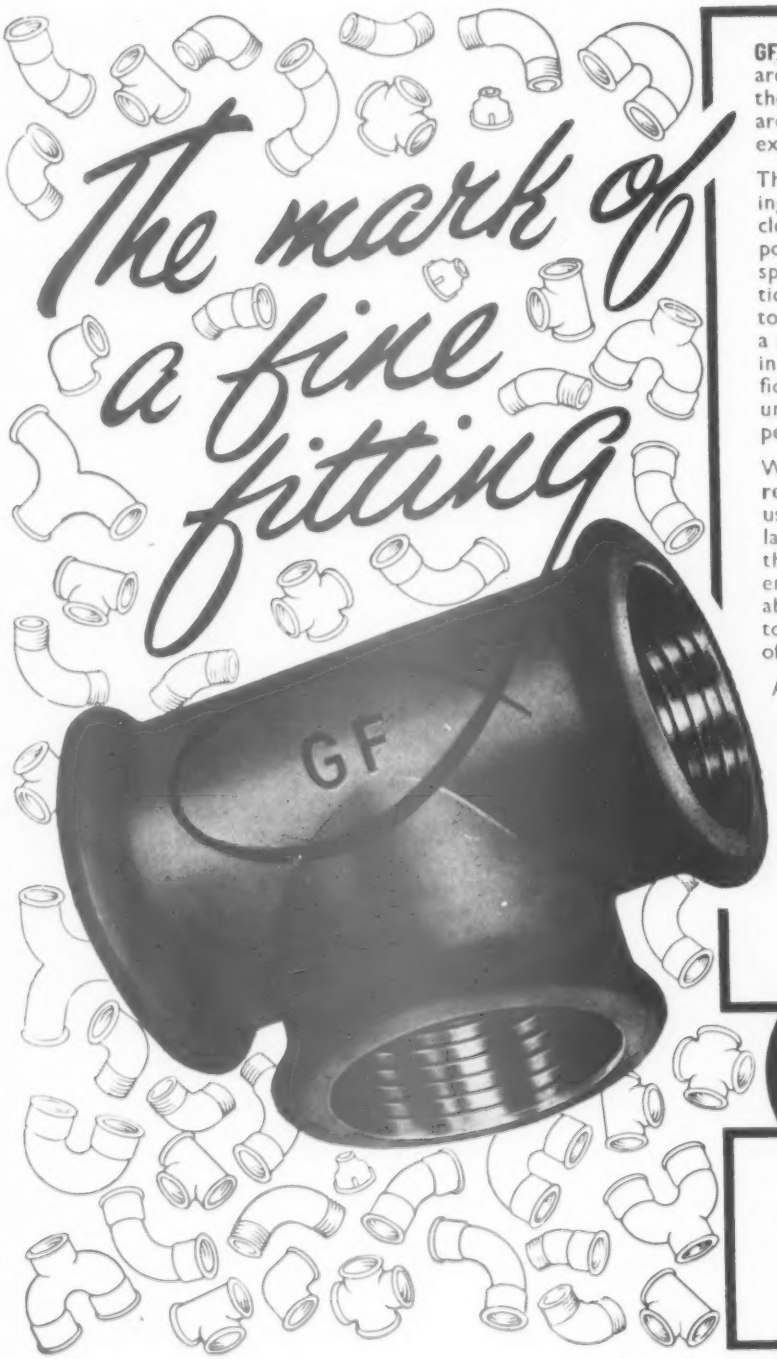

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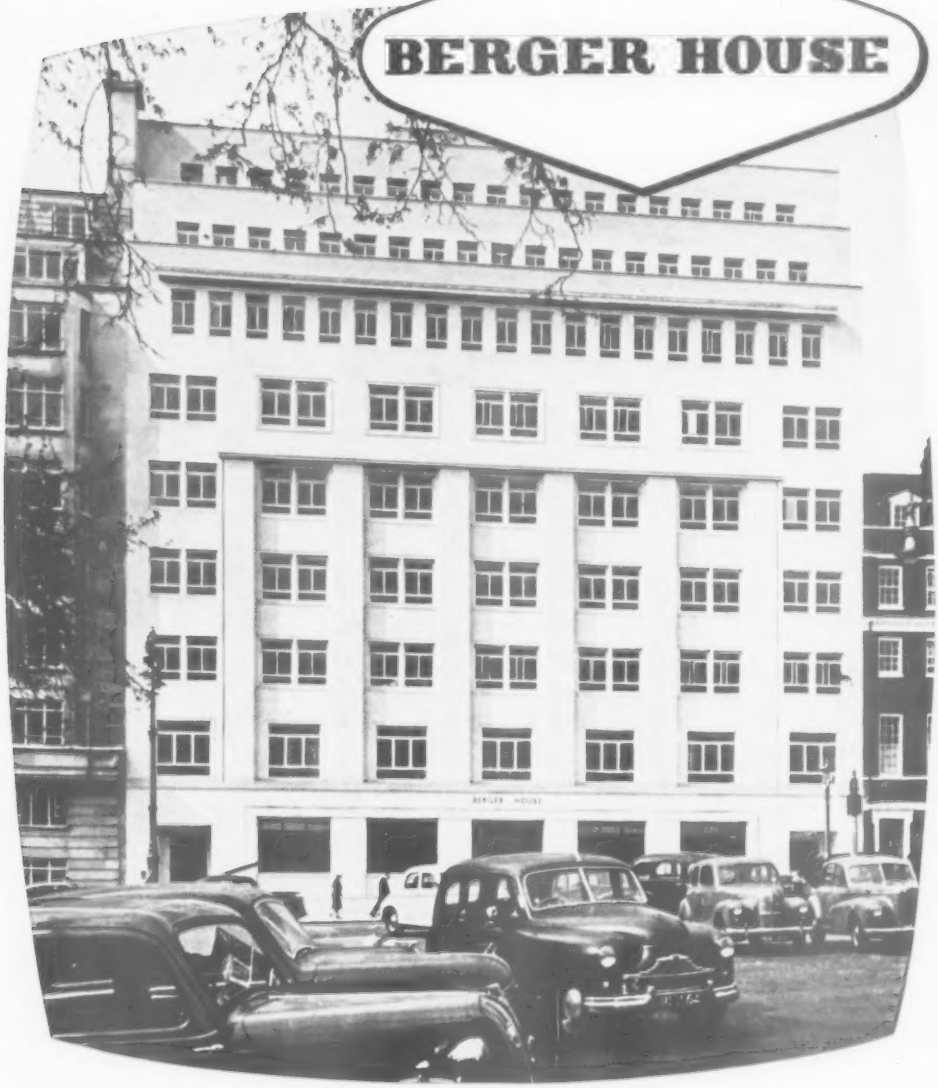

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